



United States
Department of
Agriculture

Forest
Service

Evanston Ranger District
Wasatch-Cache National Forest
1565 Hwy 150 Suite A
P.O. Box 1880
Evanston, Wyoming 82930
307 789 3194

Reply to: 2820 (1950)

Date: June 12, 1987

RECEIVED
JUL 06 1987

**DIVISION OF
OIL, GAS & MINING**

Carolyn Wright
Resource Dev. Coordinating Comm.
116 State Capitol Bldg.
Salt Lake City, Utah 84114

Dear Carolyn Wright:

Attached is a Scoping Document for a drill pad and access road as proposed by Wolverine Exploration Co. You are invited to comment on this proposal as part of the public involvement process and development of the Environmental Assessment (E.A.). We would like your comments, concerns, and additional alternatives that you feel appropriate by July 17, 1987. Please return your input to the above address.

If you have any questions, please feel free to call.

Sincerely,

for Bernard Casey
CLYDE N. THOMPSON
District Forest Ranger



ENVIRONMENTAL ASSESSMENT SCOPING DOCUMENT

Wolverine Exploration Co.
(Formerly American Quasar Petroleum Co.)

Christmas Meadows Federal #4-34
Lease U-24446

Evanston Ranger District
Wasatch-Cache National Forest
P.O. Box FS
Evanston, Wyoming 82930

I. INTRODUCTION

Wolverine Exploration Co. (formerly American Quasar Petroleum Co.) is proposing to drill a 6100 foot deep oil well on the Evanston Ranger District, Wasatch-Cache National Forest. The drilling proposal, known as Christmas Meadows Federal #4-34, is located approximately one mile north of the Christmas Meadows summer home and campground area. 1/ Also proposed are two alternative access routes to the proposed drillsite (see attached map).

Under federal leasing laws, the leasee is granted, subject to the lease stipulations, the right to drill for and dispose of all oil and gas deposits found within the lease. The Forest Service did not determine the need to drill but is considering mitigating opportunities for environmental protection and coordination with other resource uses.

Nature of Decisions to be made

1. A determination whether or not the proposal is in conformance with existing Forest Service Policies, regulations, and approved land management direction.
2. The location of an environmentally suitable drill site and access route that best coordinates to other resource management activities, minimize surface resource impacts.
3. A determination of appropriate mitigation, management, and monitoring requirement.

Major Issues

During the environmental analysis process some of the following issues may be determined to be insignificant, however at the same time additional issues may be discovered which will be analyzed and discussed in the final environmental assessment.

1. Potential conflicts between recreational and drilling activity traffic on the Stillwater/Christmas Meadows road (Forest Road #057).
2. Potential conflicts between users of the Bear River-Smiths Fork Trail and the proposed drilling pad's access road.
3. Road density levels and management standards.
4. Drilling mud and produced fluids disposal.

1/ T. 1 N., R. 10 E., Sec. 4, NE SW SE, Salt Lake Meridium, Summit County, Utah.

II. ALTERNATIVES

Alternatives for oil and gas exploratory wells are somewhat limited. They are tied to leases and geographical structures. Flexibility in moving a proposed location is limited in most cases to those minor adjustments needed to move off of a stream or steep slope. From an environmental impact concern, the impacts are usually similar in the general location where the drill pad is located. More flexibility exists in access road location.

Possible access routes would utilize between approximately one and a half miles or approximately 3 miles of the Stillwater/Christmas Meadows Road (#057). In either case an additional 3/4 to one mile of new road would have to be constructed (refer to map).

III. AFFECTED ENVIRONMENT

Significant components of the environment which might be affected by the proposal include: soils, water, vegetation/timber, recreation, wildlife, and visuals. These components and potential impacts will be discussed in the project environmental assessment.

The Stillwater/Christmas Meadows Road (#057) provides access to the Christmas Meadows Campground (11 units), the Christmas Meadows Summer Home area (40 lots), and the Stillwater Fork Trailhead (popular access point for High Uintas Wilderness). It ranges between 12 to 16 feet wide and has only a thin gravel surface which has all but vanished in many areas. The road is fairly rough but it can still be traveled by sedans at slow to moderate speeds.

Firewood cutting has occurred along the Stillwater Road for many years. A large number of the mature lodgepole pine growing on the proposed drill pad site have been killed by the mountain pine beetle and subsequently cut and hauled away. The majority of the trees left are infested with dwarf mistletoe. The proposed access roads would cross areas similar to those described as well as crossing through large groves of aspen.

Soils tend to be quite shallow and rocky. Slopes vary from 0% to 40% plus on those areas to be crossed by the proposed access roads and around 10% on the area to be occupied by the proposed drill pad. A small stream descends the slope a hundred yards north of the proposed drill pad.

The Bear River-Smith Fork Trail ascends the slope just north of the proposed drill pad site. This trail receives very little recreational use and some administrative use. It is open to motorized vehicles and some ATV use is evident. The lower 1/4 mile of this trail has been used by 4-wheel vehicles to haul firewood but is too steep to be considered as a possible access route for this proposal.

The visual Quality Objective for this area, which identifies the amount of man made changes in the natural landscape we can tolerate, is Partial Retention. This means that man made changes can be seen but they must not dominate the character of the landscape as it is now seen from the Stillwater road.

The discussion in this section was meant to only give some basic information. The final environmental assessment will contain a complete discussion of all those components of the environment which will be affected.

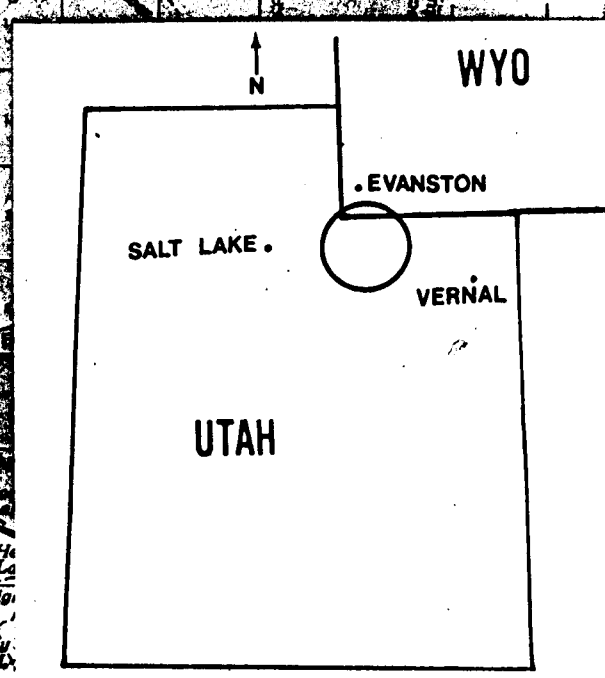
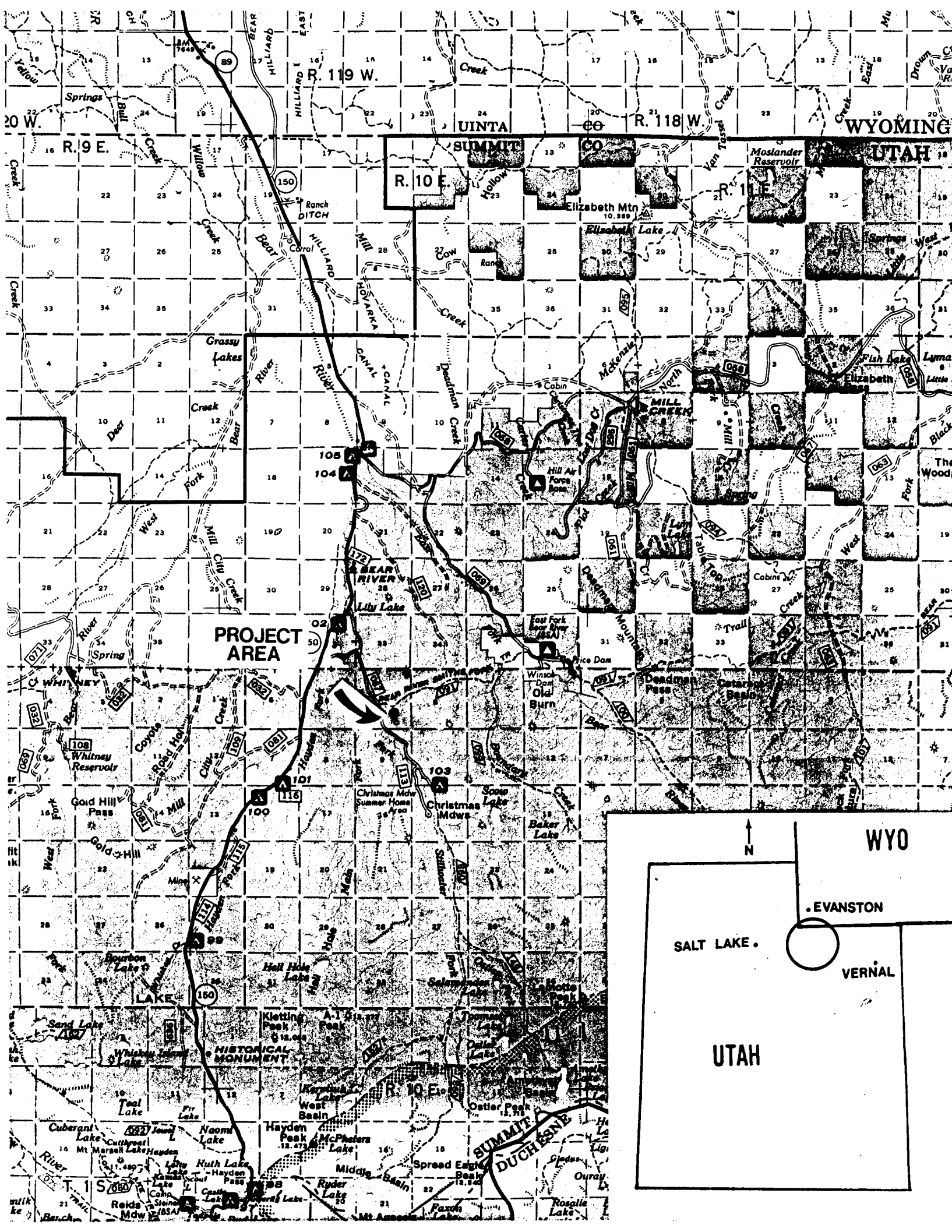
IV. GENERAL INFORMATION

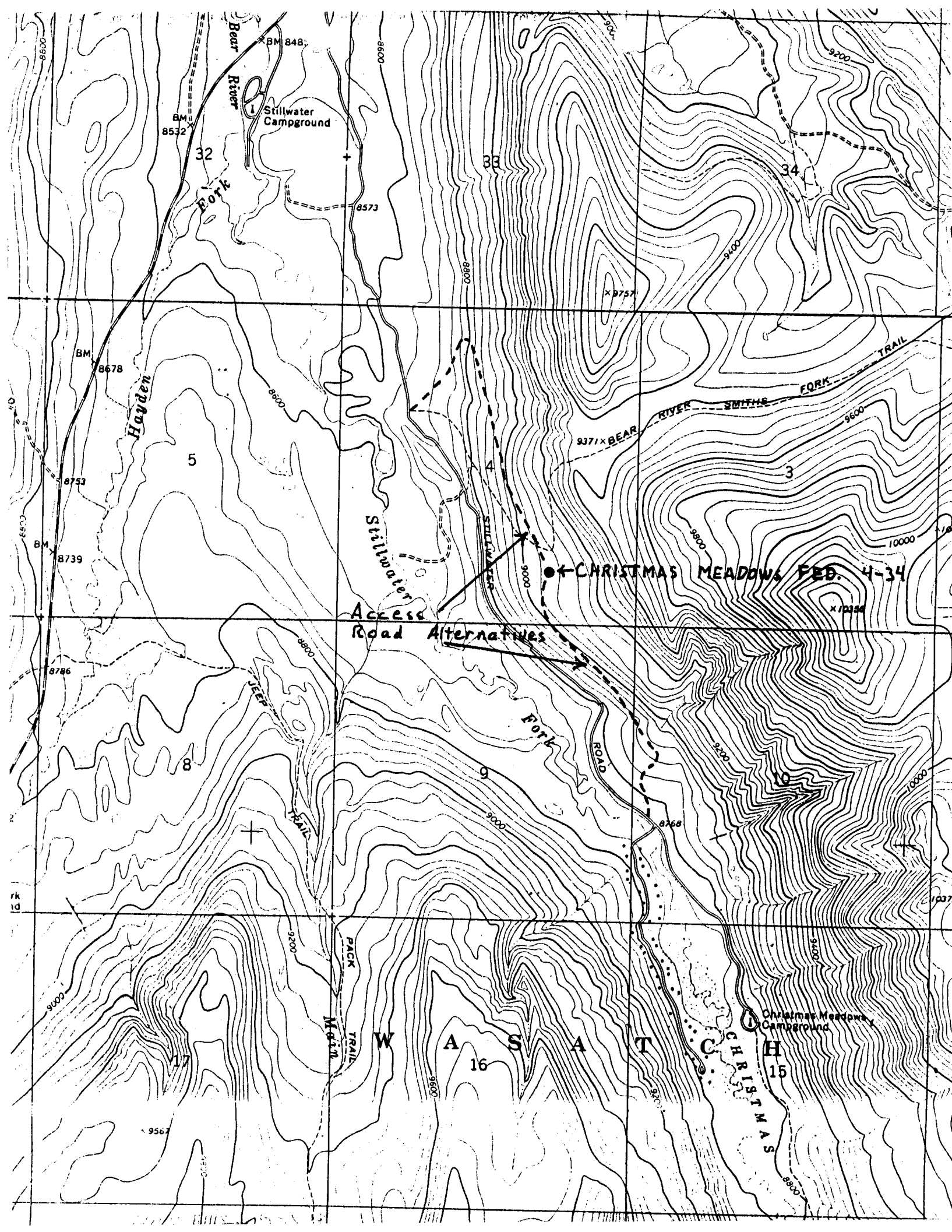
The Interdisciplinary Team necessary for analysis of this proposal will have expertise in the following areas:

1. Soils
2. Hydrology
3. Wildlife Biology
4. Recreation
5. Visual/Landscape Management
6. Engineering
7. Archeology
8. Vegetation

Public Involvement

The public and other resource management agencies are encouraged to participate throughout this environmental analysis process. Public responses will be most helpful if they are received by the specified date on the attached cover letter, which reflects a 30 day comment period. The environmental assessment will be finalized at the end of that comment period. Please address comments to the Evanston District Ranger, P.O. Box FS, Evanston, Wyoming 82930





HEITZMAN DRILL-SITE SERVICES

DALE HEITZMAN
ROBERT M. ANDERSON

MEMBER: IPAMS

July 10, 1987

Mr. John Baza
State of Utah
Division of Oil, Gas & Mining
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

RECEIVED
JUL 13 1987

DIVISION OF
OIL, GAS & MINING


RE: Request for Spacing Exception
American Quasar Petroleum Company
Christmas Meadows Federal #4-34
874' FSL, 1306' FEL, Section 4
T1N, R10E, S.L.M.
Summit County, Utah

Dear Mr. Baza:

American Quasar Petroleum Company respectfully requests a spacing exception to the statewide spacing rules (40 acres for oil and/or gas) for the above-referenced well location. Due to rugged topography, the proposed drill site could not be located within 200 feet of the center of the selected 40-acre tract. American Quasar Petroleum Company owns the entire SE quarter-section of Section 4, T1N, R10E - including all lands within 460 feet of the proposed drill site. I have enclosed a xerox copy of a unit map for the proposed Christmas Meadows Unit which reflects this ownership.

In addition, I have enclosed two (2) copies of the Christmas Meadows Federal #4-34 Application for Permit to Drill for your convenience. I would appreciate your reviewing this information and approving both the request for Spacing Exception and the Application for Permit to Drill at your earliest convenience. Should you have any questions in regards to the proposed project do not hesitate to contact me. Please direct all correspondence regarding this proposal to me at the address shown below.

Sincerely,
HEITZMAN DRILL-SITE SERVICES


Robert M. Anderson
Authorized Agent

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

PLUG BACK ☐

b. TYPE OF WELL

OIL
WELL ☒

GAS
WELL ☐

OTHER

SINGLE
ZONE ☒

MULTIPLE
ZONE ☐

2. NAME OF OPERATOR

American Quasar Petroleum Company

3. ADDRESS OF OPERATOR

201 Main Street, Suite 400, Fort Worth, Texas 76102

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)*

At surface

874' FSL, 1306' FEL (NE^{SE}₄SW₄SE₄) 4-1N-10E S.L.M.
At proposed prod. zone

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

40 Miles South of Evanston, Wyoming

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT.
(Also to nearest drlg. unit line, if any)

874'

16. NO. OF ACRES IN LEASE

200

17. NO. OF ACRES ASSIGNED
TO THIS WELL

40

18. DISTANCE FROM PROPOSED LOCATION*
TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

N/A

19. PROPOSED DEPTH

6100'

20. ROTARY OR CABLE TOOLS

Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)

9092' GR

22. APPROX. DATE WORK WILL START*

August 15, 1987

23.

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
26 "	20 "	Conductor	0- 120'	50 sx, Circ. to Surface ***
17-1/2"	13-3/8"	48.0# H-40	0- 350'	250 sx, Circ. to Surface
12-1/4"	9-5/8"	36.0# K-55	0-3500'	1500 sx, Circ. to Surface
8-3/4"	7 "	23.0# K-55	0-6100'	1200 sx Lite + Class "H"

* Secondary term lease: Expires October 29, 1987

** Proposed Federal Unit.

*** Cement volumes may change due to hole size.
Calculate from Caliper log.

All potentially productive hydrocarbon zones will be cemented off.

EIGHT-POINT RESOURCE PROTECTION PLAN ATTACHED.

American Quasar Petroleum Company has a current nationwide bond.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED

Robert M. Anderson

(This space for Federal or State office use)

TITLE Authorized Agent

DATE July 10, 1987

PERMIT NO.

43-043-30285

APPROVAL DATE

APPROVED BY

TITLE

CONDITIONS OF APPROVAL, IF ANY:

RECEIVED
JUL 13 1987

*See Instructions On Reverse Side

DIVISION OF
OIL, GAS & MINING

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

GLO B.C. 1941

RIOE



SCALE 1"=1000'

GLO B.C. 1941 TIN

THE CHRISTMAS MEADOWS
FEDERAL 4-34
ungraded elev. 9092

1306'

Basis of ELEV.
USGS BM "EVAN"
8161

874'

(Solar Obser.) N 0° 54' 57" E,
2639.55' (measure)

N 89° 33' 41" W (protracted)

GLO B.C. 1941

CERTIFICATE OF SURVEYOR

STATE OF UTAH
COUNTY OF SUMMIT

} SS

I, DICK R. GRIFFIN of Rock Springs, Wyoming, hereby certify that this map was made from notes taken during an actual survey under my direct supervision on May 9, 1987, and that it shows correctly the location of THE CHRISTMAS MEADOWS FEDERAL 4-34.


UTAH R.L.S. No. 5120

NOTE

- FOUND CORNER
- ⊙ PROPORTIONED CORNER
- ◇ WELL LOCATION

JOB NO. 1250

PLAT OF DRILLING LOCATION

for
WOLVERINE EXPLORATION CO.

874' F/SL & 1306' F/EL, Section 4
T 1 N, R 10 E of the S.L.M.

Prepared by:

D. R. GRIFFIN & ASSOCIATES
P.O. BOX 1059 (307) 362-5028
ROCK SPRINGS, WYOMING 82901

T 2 N

33



Union Pacific Resources Company

10-29-87

34

③

U-27663

T 2 N

3 48 61 2 48 40 1 48 18

5
(674.00)

17

U-55027

UNRELEASED

ENRON OIL & GAS
COMPANY, et al 9-30-92

U-51515

14

②

(670108)

AMERICAN QUASAR
PETROLEUM
COMPANY OF
NEW MEXICO, et al
10-29-87

U-24446-A

UNLEADED

3
(667. 34)

18

Federal

AMERICAN QU.
OF NE

8

17

U - 55027

9

①

U-24446

UNRELEASED

18

Federal

- 10

ENRON OIL & GAS COMPANY, et al
9-30-92

14

U-51515

AMERICAN
COMPANY OF
10

IRON OIL & GAS COMPANY
et al
9-30-92

16

AMERICAN QUASAR
PETROLEUM
COMPANY OF
NEW MEXICO,
et al
10-29-87

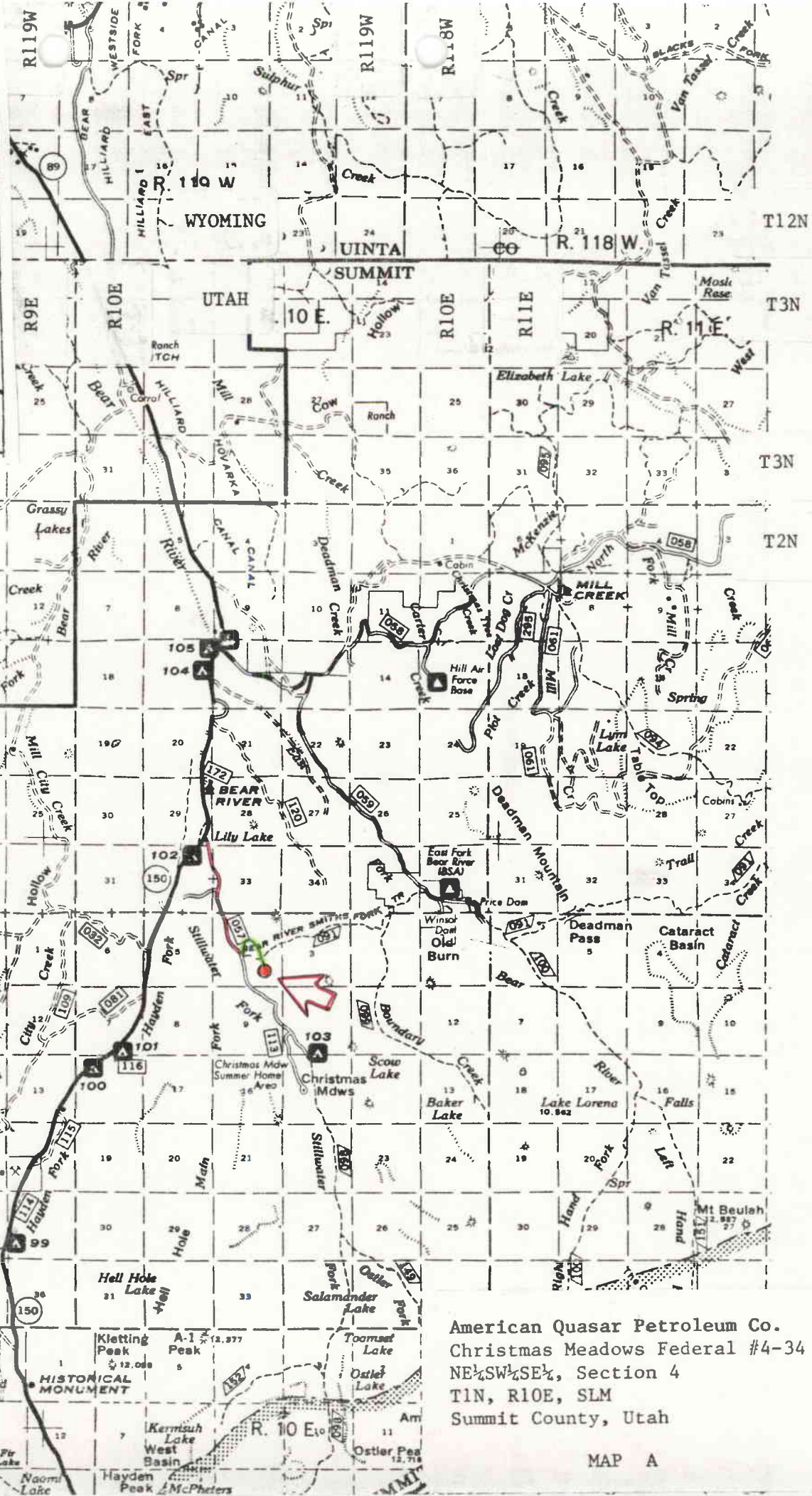
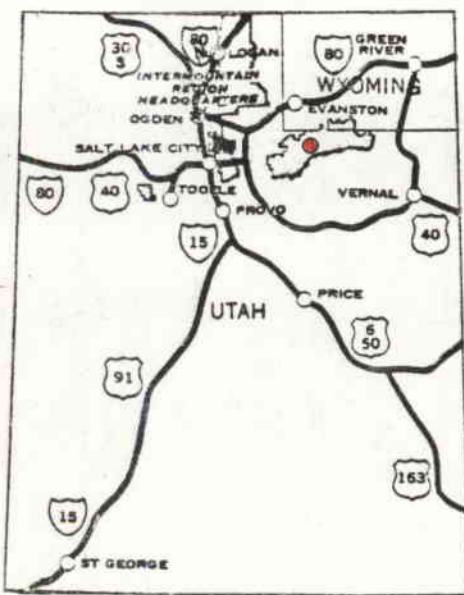
ENRON OIL & GAS
COMPANY, et al

9-30-92

ENRON OIL & GAS COMPANY, et al
9-30-92

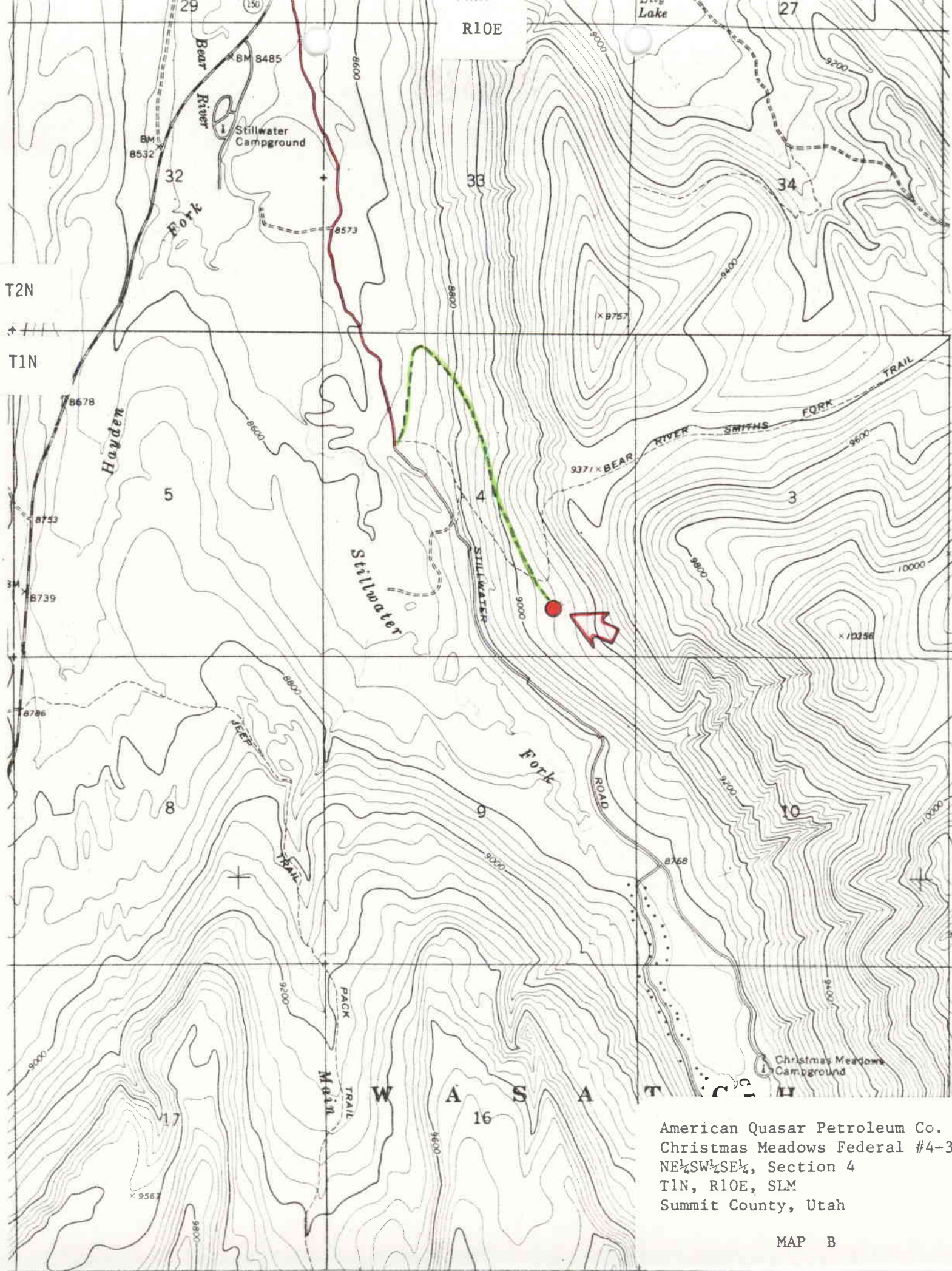
AMERICAN
COMPANY OF

KEY MAP



American Quasar Petroleum Co.
Christmas Meadows Federal #4-34
NE1/4SW1/4SE1/4, Section 4
T1N, R10E, SLM
Summit County, Utah

MAP A



American Quasar Petroleum Co.
Christmas Meadows Federal #4-34
NE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$, Section 4
T1N, R10E, SLM
Summit County, Utah



DRILLING LOCATION ASSESSMENT
State of Utah
Division of Oil, Gas & Mining

OPERATOR: Wolverine Exploration Co. WELL NAME: Christmas Meadows Federal #4-34
QTR/QTR: SWSE SECTION: 4 TWP: 1N RANGE: 10E
COUNTY: Summit FIELD: Wildcat 874' F S L 1306' F E L
SFC OWNER: U.S. Forest Service LEASE #: U-24446 OG
SPACING: F SECTION LINE F QTR/QTR LINE F ANOTHER WELL
INSPECTOR: Carol Revelt DATE & TIME: May 22, 1987 at 10:30 a.m.
PARTICIPANTS: Dale Heitzmann and Jess Nunnelee of Wolverine; John Crews and Dick Griffin
of D.R. Griffin & Assoc.--surveyors; Bernard Asay, By Hoffman, and Clark Ostergaard, USFS;
Dan Washington and Rick Stamm of BLM.

REGIONAL SETTING/TOPOGRAPHY: Intersection of the Utah Thrust Belt and Uinta Mountains.
Well will be located on the east side of the glacially carved valley of Stillwater
Fork.

LAND USE

CURRENT SURFACE USE: National Forest Land--timber cutting, wildlife grazing, and camping,
hiking, and outdoor recreation.
PROPOSED SURFACE DISTURBANCE: 330'x200' with a 35'x165' extension for the pit (see
diagram in attached notice of staking). 1 1/2 mile access road will be built or
improved from existing roads.
AFFECTED FLOODPLAINS AND/OR WETLANDS: Access road will cross 2 or 3 springs. Pad will be
1/4 mile from springs, and 1500'-2000' from wetlands of Stillwater Fork.
FLORA/FAUNA: Conifers, aspens, and small shrubs. Wildflowers just starting to bud--mature
forest environment. Deer and moose seen near the location.

ENVIRONMENTAL PARAMETERS

GEOLOGY

SOIL TYPE AND CHARACTERISTICS: Brown silty clay with cobbles of the Uinta Mountain
group.
SURFACE FORMATION & CHARACTERISTICS: Surface formation not exposed--covered with
a layer of Quaternary alluvium.

EROSION/SEDIMENTATION/STABILITY: Proposed site is on a gentle, tree covered slope.

Largest cut will be about 15'--no erosion/stability problems anticipated.

SUBSURFACE GEOLOGY

OBJECTIVE(S)/DEPTH(S): Phosphoria at 6100'.

ABNORMAL PRESSURES - HIGH AND LOW: None currently anticipated.

CULTURAL RESOURCES/ARCHAEOLOGY: Dick Enders of AEC will perform survey.

WATER RESOURCES: There are many small springs near the proposed site but Stillwater Fork of the Bear River is the closest major drainage--well is about 1/2 mile from the river. No other wells are located within 1/4 mile but site is about 3/4 mile from cabins located upstream. Major drainage is sub-parallel in orientation.

RESERVE PIT

CHARACTERISTICS: 75' x 165' x 10' with about 16,910 bbl capacity--pit cut will be about 9726 cu. yds, at least 50% of which will be on cut.

LINING: Will be determined upon construction of pit. If liner is necessary will probably use the plastic-nylon reinforced type.

MUD PROGRAM: Plan to use a fresh water chem gel with bentonite for the entire depth.

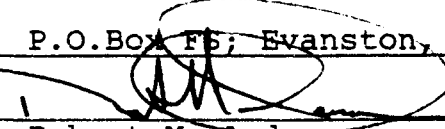
DRILLING WATER SUPPLY: Will either haul water, drill a well, or pump water from the nearby stream--whichever is cheaper.

OTHER OBSERVATIONS: Lease expires for this location in October. If this well is a discovery they will try to permit 2nd well before the snows fall. Gas from the Phosphoria formation is sour--will have adequate H2S warnings on location. Will send rehab program with APD. Road grade to location is 6-8%. Drill time will be 30-40 days.

STIPULATIONS FOR APD APPROVAL: State of Utah will support any stipulations issued by the BLM and USFS. Only Utah stipulations are that Wolverine should notify DOGM when pit is constructed and before fluids are put in it, and that H2S emergency equipment should be on site before drilling into the Phosphoria formation.

ATTACHMENTS: See attached photos and staking permit.

NOTICE OF STAKING

Oil Well XXX Gas Well _____ Other _____ Lease No. U-24446 OG
Well Name & No. Christmas Meadows Federal #4-34
Operator American Quasar Petroleum Company
Address 3909 Hulen, Suite 400; Fort Worth, Texas 76107
Contact Person Jess B. Nunnelee Phone (817) 735-8229
Agent Heitzman Drill-Site Services
Address P.O. Drawer 3579; Casper, Wyoming 82602-3579
Contact Person Dale Heitzman/Bob Anderson Phone (307) 266-4840
If Indian, Allottee or Tribe Name Not Applicable
Unit Name Not Applicable Field or Wildcat Name Wildcat
Formation Objective(s) Phosphoria
Estimated Well Depth 6100'
County Summit State Utah
Well Surface Location NESWSE, Section 4, T1N, R10E, S.L.M.
Bottom Hole Location (if known) Same as Above
Private Surface Owner (if known) N/A: U.S. Forest Service Surface
Address P.O. Box 85; Evanston, Wyoming 82930 Phone (307) 789-3194
Signed  Title Agent Date 04/29/87
Robert M. Anderson

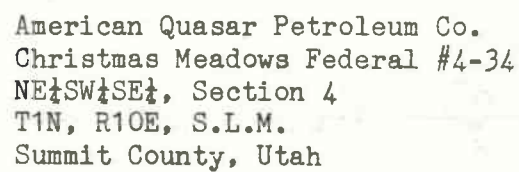
Attachments to the Notice of Staking

1. An acceptable map showing the well location and the access road from the nearest locatable reference point (usually a town or public road).
2. A USGS Topographic map showing the well location, access road, and the intersection of the access road with any unit/lease boundary.

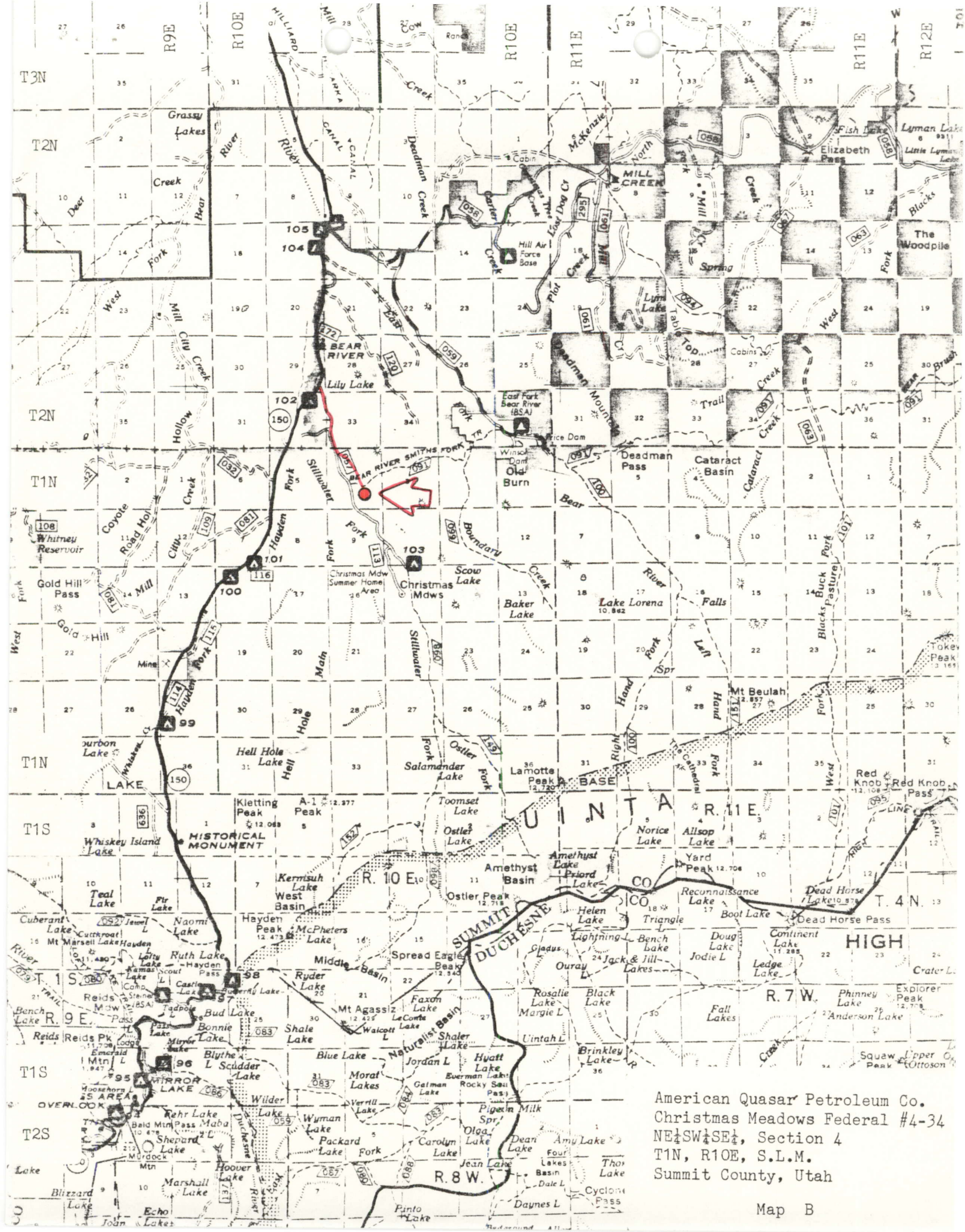
To Be Completed by Operator Prior to On-Site Inspection

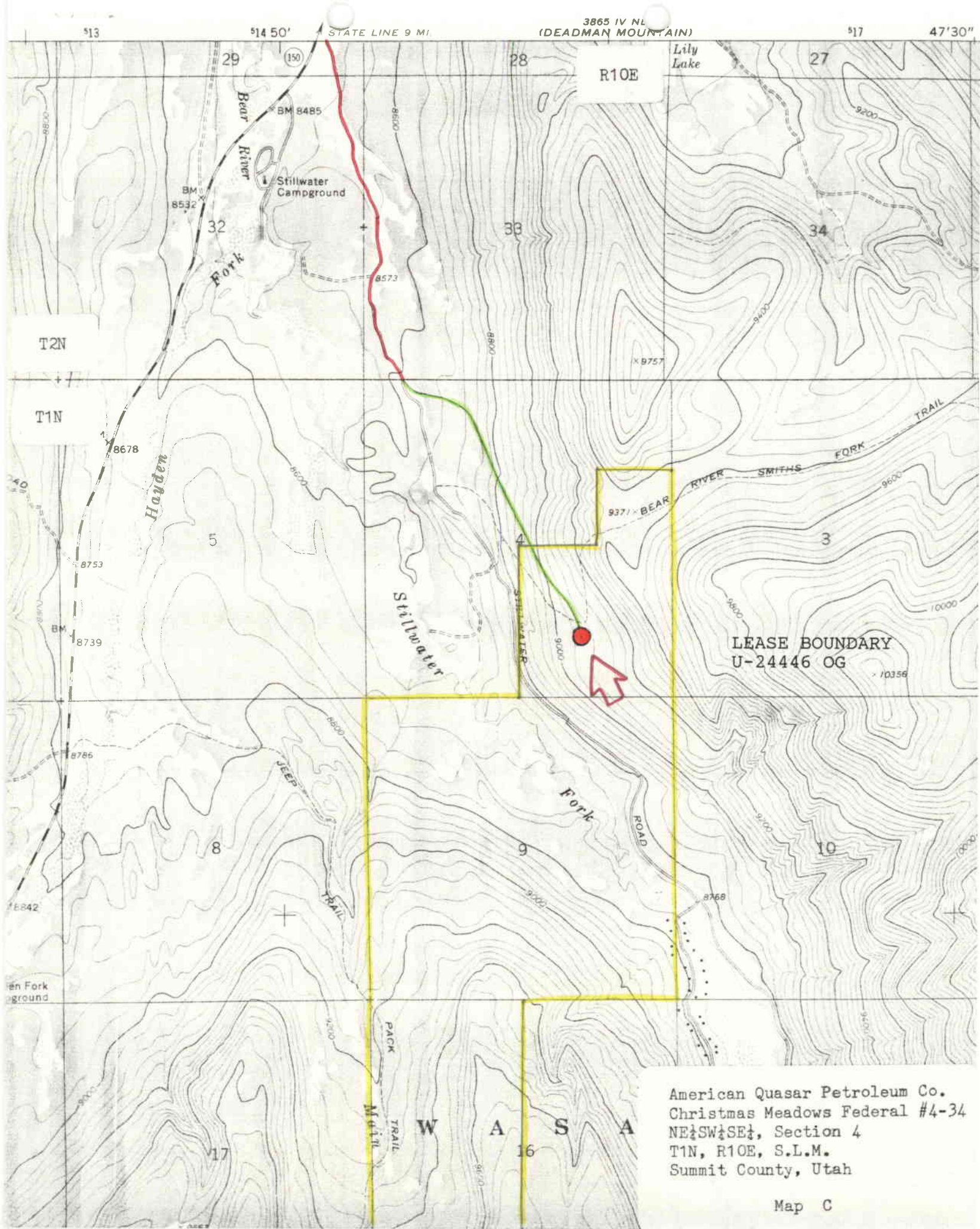
1. Location survey with certificate of the surveyor.
2. Wellsite layout plan with a scale of 1" = 50'.

UNIT	COUNTY
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100	100



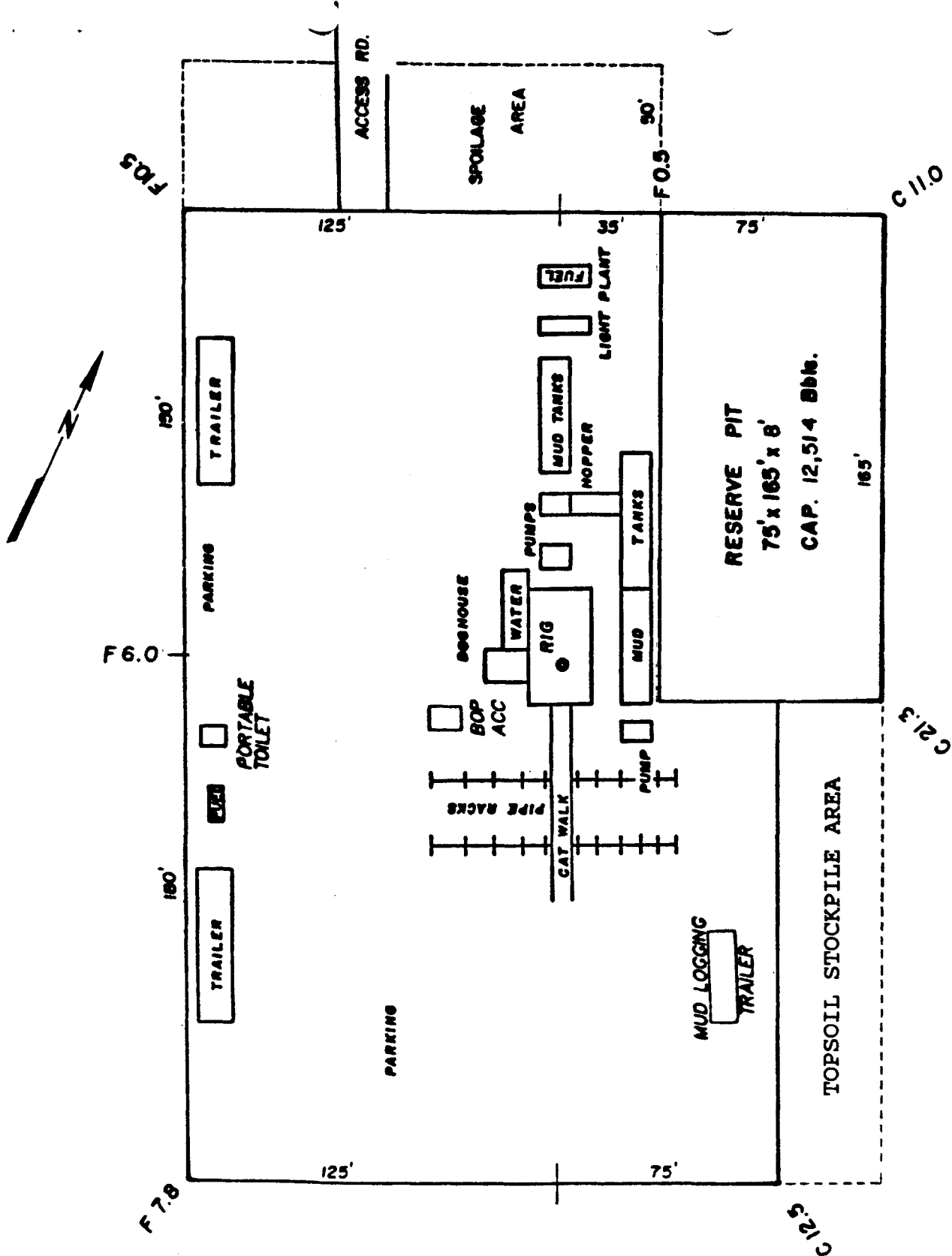
Map A





American Quasar Petroleum Co.
Christmas Meadows Federal #4-34
NE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$, Section 4
T1N, R10E, S.L.M.
Summit County, Utah

Map C



AMERICAN QUASAR PETROLEUM COMPANY
 Lease #U-24446A, Christmas Meadows Federal #4-34
 NESWSE, Section 4, T1N, R10E, SLM
 Summit County, Utah

FIGURE #1

SCALE : 1" = 50'

GLO B.C. 1941

RIOE



SCALE 1"=1000'

GLO BC. 1941 TIN

THE CHRISTMAS MEADOWS
FEDERAL 4-34
ungraded elev. 9060
1600'

Basis of ELEV.
USGS BM "EVAN"
8161

1000'

(Solar Obser.) N 0° 54' 57" E,
2639.55' (measure)

N 89° 33' 41" W (protracted)

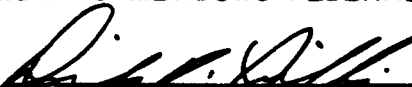
GLO BC. 1941

CERTIFICATE OF SURVEYOR

STATE OF UTAH
COUNTY OF SUMMIT

} SS

I, DICK R. GRIFFIN of Rock Springs, Wyoming, hereby certify that this map was made from notes taken during an actual survey under my direct supervision on May 9, 1987, and that it shows correctly the location of THE CHRISTMAS MEADOWS FEDERAL 4-34.


UTAH R.L.S. No. 5120

NOTE -

- FOUND CORNER
- ⊙ PROPORTIONED CORNER
- ◇ WELL LOCATION

JOB NO. 1250

PLAT OF DRILLING LOCATION

for
WOLVERINE EXPLORATION CO.

1000' F/SL & 1600' F/EL, Section 4
T 1 N, R 10 E of the S.L.M.

Prepared by:

D.R. GRIFFIN & ASSOCIATES
P.O. BOX 1059 (307) 362-5028
ROCK SPRINGS, WYOMING 82901

GLO B.C. 1941

RIOE



SCALE 1"=1000'

GLO B.C. 1941 TIN

THE CHRISTMAS MEADOWS
FEDERAL 4-34
ungraded elev. 9092

1306'

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JOB NO. 1250

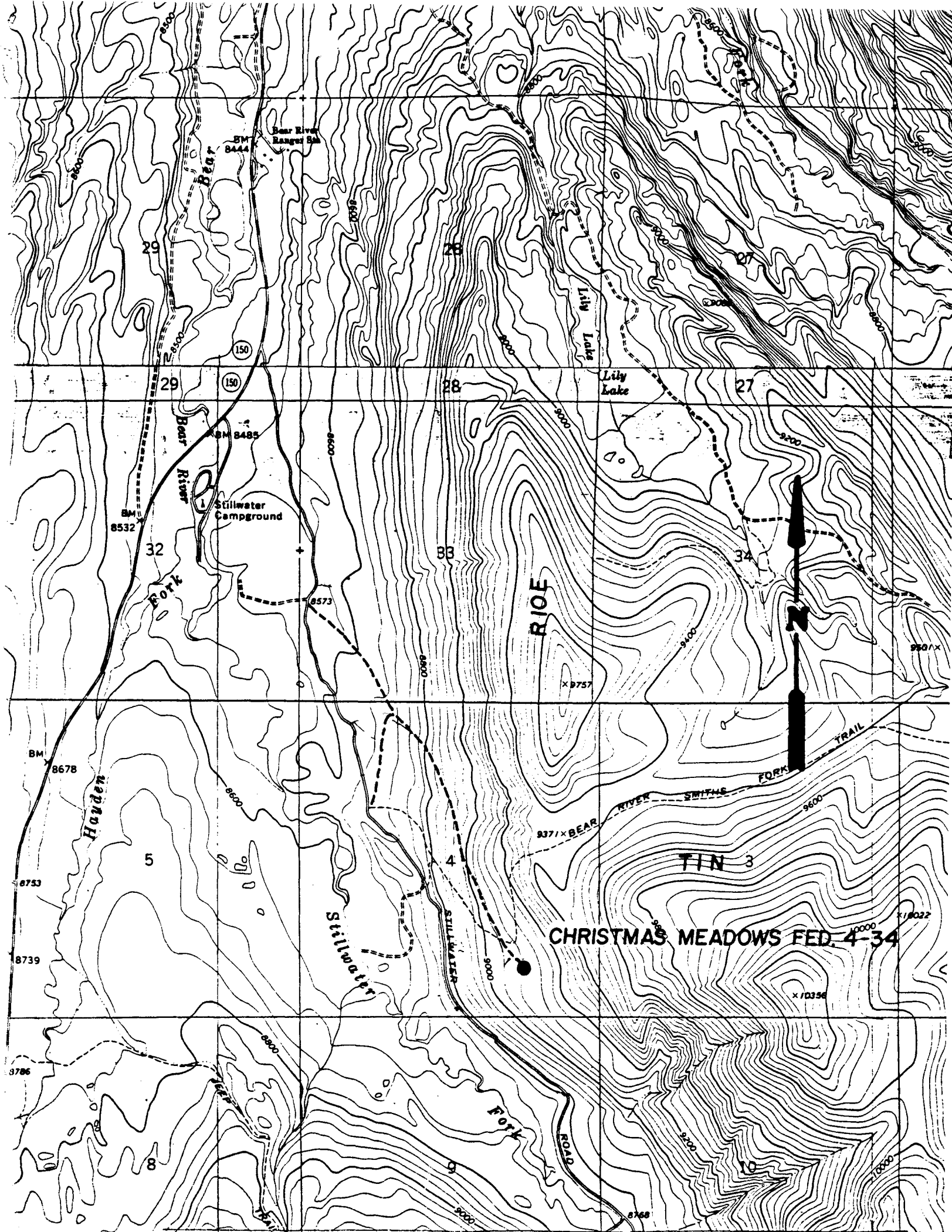
PLAT OF DRILLING LOCATION

for
WOLVERINE EXPLORATION CO.

874' F/SL & 1306' F/EL, Section 4
T 1N, R 10E of the S.L.M.

Prepared by:

D.R. GRIFFIN & ASSOCIATES
P.O. BOX 1059 (307) 362-5028
ROCK SPRINGS, WYOMING 82901



Bear River
Ranger Sta

BM
8444

Bear
River

29

28

27

(150)

(150)

BM
8485

Stillwater
Campground

BM
8532

32

Fork

33

34

RIOE

X 8757



BM
8678

Harden

5

8753

8739

Stillwater

4

9371 X BEAR

TIN 3

CHRISTMAS MEADOWS FED. 4-34

X 10356

X 10022

8786

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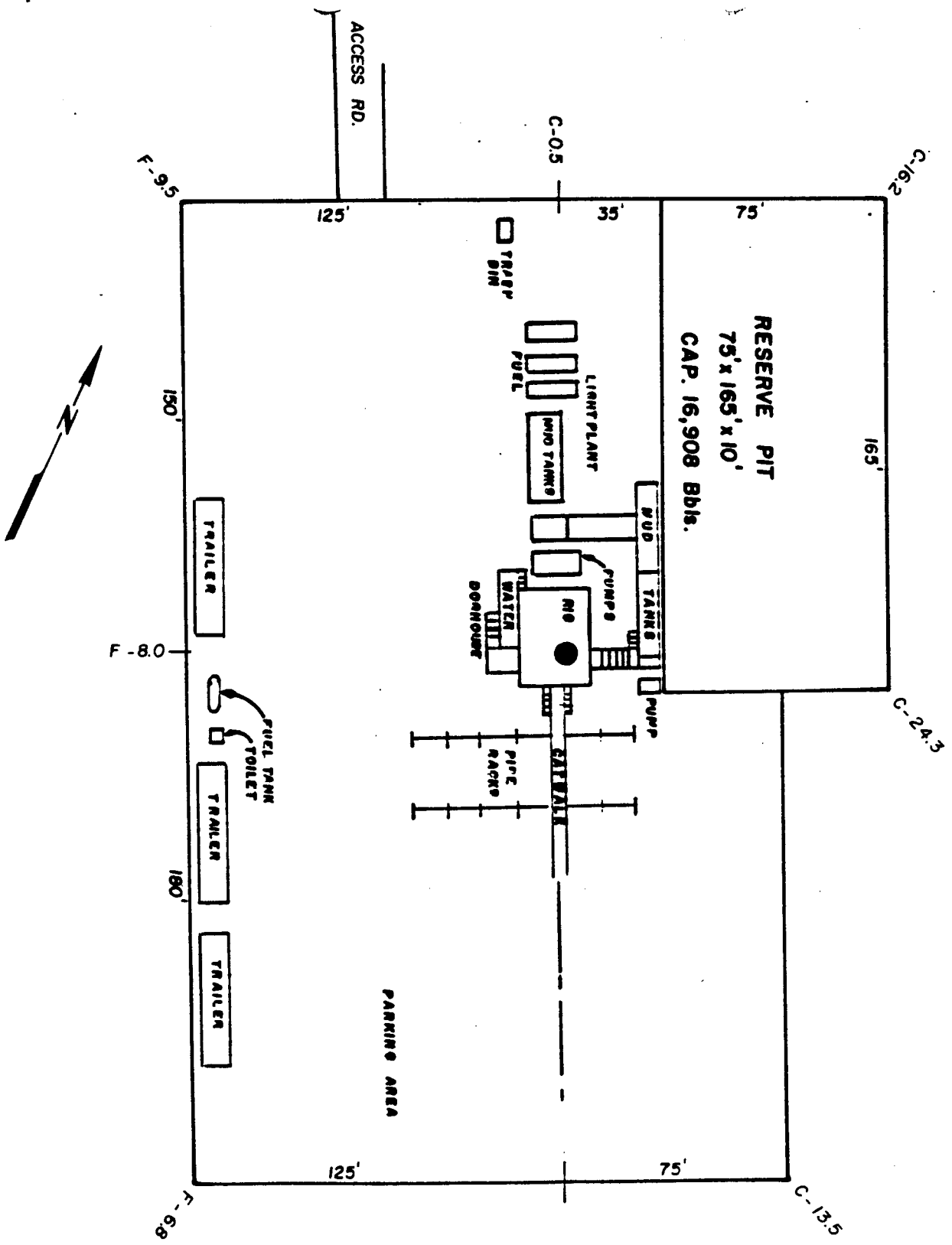
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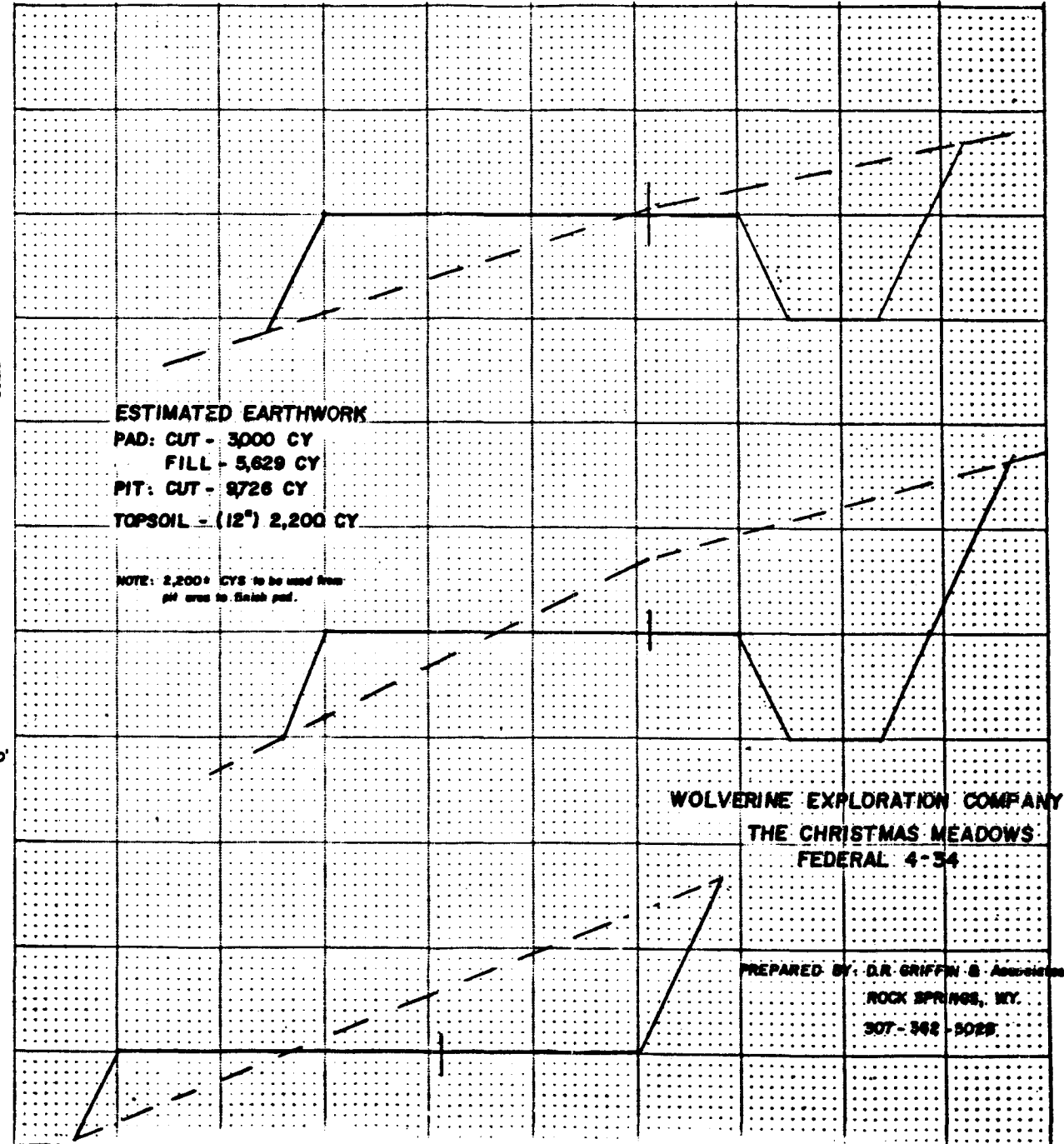
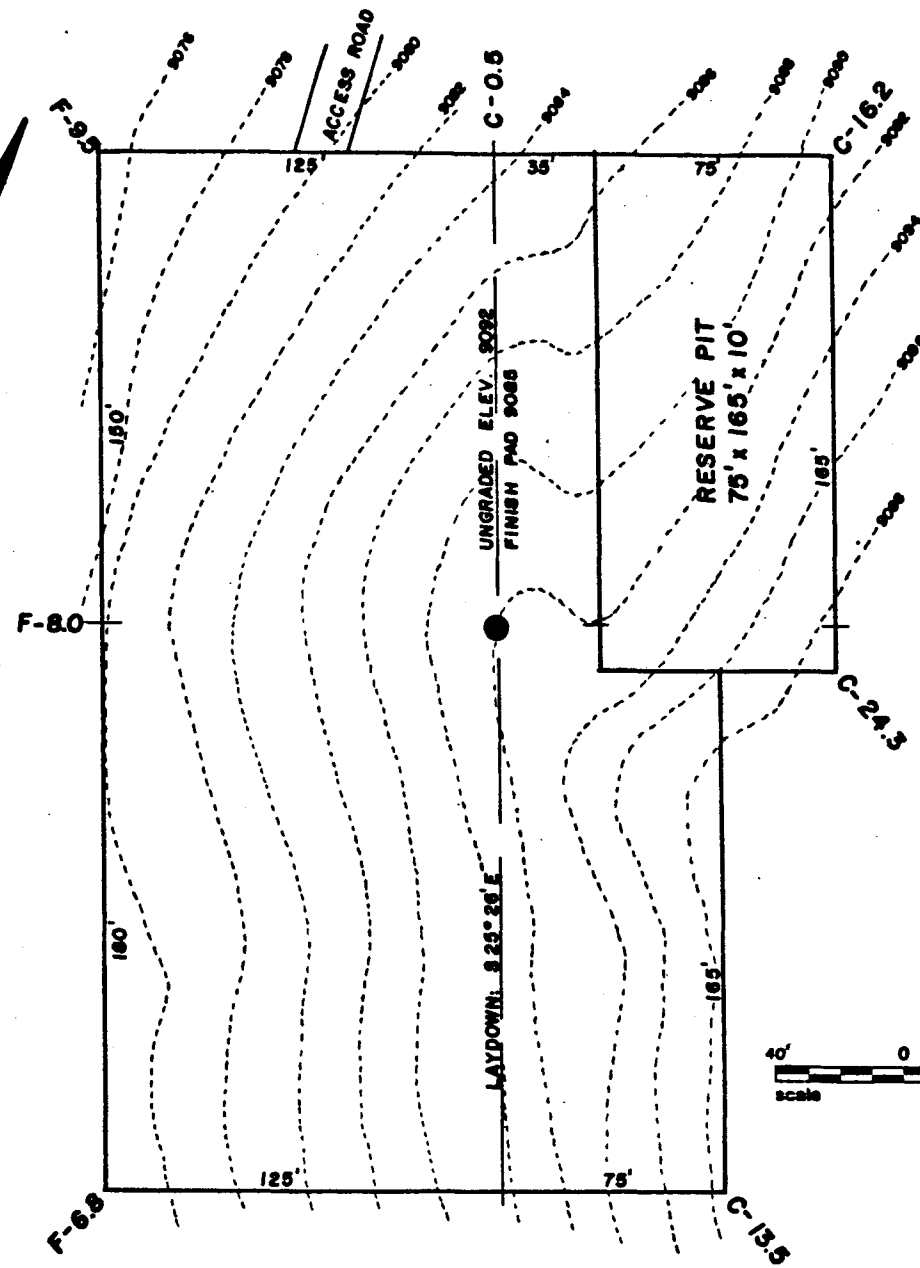
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ROAD

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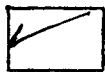
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OPERATOR American Quasar Petroleum Co. DATE 7-15-87
WELL NAME Christmas Meadows Fed. 4-34
SEC SE 4 T 1N R 10E COUNTY Summit

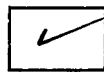
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API NUMBER

Fed.
TYPE OF LEASE

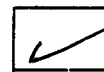
CHECK OFF:



PLAT



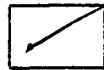
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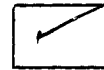
NEAREST
WELL



LEASE



FIELD



POTASH OR
OIL SHALE

PROCESSING COMMENTS:

No other well in Sec 4

Need water permit

Exception location requested.

CONFIDENTIAL
PERIOD
EXPIRED
ON 1-30-89

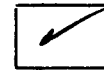
APPROVAL LETTER:

SPACING: ☐ 203 _____ UNIT

☐ 302



CAUSE NO. & DATE



302.1

STIPULATIONS:

1- Water



STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

Norman H. Bangerter, Governor
Dee C. Hansen, Executive Director
Dianne R. Nielson, Ph.D., Division Director

355 W. North Temple • 3 Triad Center • Suite 350 • Salt Lake City, UT 84180-1203 • 801-538-5340

July 17, 1987

American Quasar Petroleum Company
201 Main Street, Suite 400
Fort Worth, Texas 76102

Gentlemen:

Re: Christmas Meadows Federal 4-34 - SE SE Sec. 4, T. 1N, R. 10E
874' FSL, 1306' FEL - Summit County, Utah

Approval to drill the referenced well is hereby granted in accordance with Rule 302.1, Oil and Gas Conservation General Rules, subject to the following stipulations:

1. Prior to commencement of drilling, receipt by the Division of evidence providing assurance of an adequate and approved supply of water as required by Chapter 3, Title 73, Utah Code Annotated.

In addition, the following actions are necessary to fully comply with this approval:

1. Spudding notification to the Division within 24 hours after drilling operations commence.
2. All well operators are responsible for sending an Entity Action Form to the Division of Oil, Gas and Mining within five working days of the time that a new well is spudded or a change in operations or interests necessitates a change in Entity status.
3. Submittal to the Division of completed Form OGC-8-X, Report of Water Encountered During Drilling.
4. Prompt notification to the Division should you determine that it is necessary to plug and abandon this well. Notify John R. Baza, Petroleum Engineer, (Office) (801) 538-5340, (Home) 298-7695, or R. J. Firth, Associate Director, (Home) 571-6068.

Page 2

American Quasar Petroleum Company
Christmas Meadows Federal 4-34
July 17, 1987

5. Compliance with the requirements and regulations of Rule 311.3, Associated Gas Flaring, Oil and Gas Conservation General Rules.
6. Prior to commencement of the proposed drilling operations, plans for toilet facilities and the disposal of sanitary waste at the drill site shall be submitted to the local health department having jurisdiction. Any such drilling operations and any subsequent well operations must be conducted in accordance with applicable state and local health department regulations. A list of all local health departments and copies of applicable regulations are available from the Division of Environmental Health, Bureau of General Sanitation, telephone (801) 533-6163.
7. This approval shall expire one (1) year after date of issuance unless substantial and continuous operation is underway or an application for an extension is made prior to the approval expiration date.

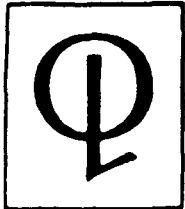
The API number assigned to this well is 43-043-30285.

Sincerely,

A handwritten signature in dark ink, appearing to read 'R. J. Firth', with a stylized flourish at the end.

R. J. Firth
Associate Director, Oil & Gas

as
Enclosures
cc: Branch of Fluid Minerals
D. R. Nielson
8159T



AMERICAN QUASAR PETROLEUM CO.
OF NEW MEXICO

1200 DENVER CLUB BUILDING, 518 SEVENTEENTH STREET, DENVER, COLORADO 80202, U.S.A.
TELEPHONE (303) 893-6663

090304

RECEIVED

AUG 17 1987

**DIVISION OF OIL
GAS & MINING**

ANNOUNCEMENT

11375

The Board of Directors of American Quasar Petroleum Co.
has approved a change in the company name effective
immediately to -

WOLVERINE EXPLORATION COMPANY.

The above address and telephone number will remain the
same.

Please adjust your records accordingly.

Sec 4, T1N, R10E
Summit County, UT
43.043.30285
Dug



AMERICAN QUASAR PETROLEUM CO.

3909 Hulen, Suite 400
Fort Worth, Texas 76107
817-735-8229

100% genuine Exp. (.)
DT

RECEIVED
SEP 2 1987

DIVISION OF OIL
GAS & MINING

August 28, 1987

Mr. Dan Washington
Branch of Fluid Minerals
Salt Lake District Office
Bureau of Land Management
2370 South 2300 West
Salt Lake City, Utah 84119

090305

RE: Christmas Meadows Federal #4-34
NESWSE, Section 4, T1N, R10E
Summit County, Utah
Lease #U-24446A

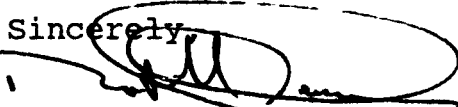
API = 43-043-30285

Dear Sir:

Pursuant to our conversation of this date, please keep all information regarding the Christmas Meadows Federal #4-34 location confidential until further notice from this office.

Your co-operation in this matter will be greatly appreciated.

Sincerely,


Robert M. Anderson
Authorized Agent

xc: State of Utah ✓
Jess Nunnelee



United States Department of the Interior

BUREAU OF LAND MANAGEMENT
SALT LAKE DISTRICT OFFICE
2370 South 2300 West
Salt Lake City, Utah 84119

IN REPLY REFER TO:

3160 (U-026)
O&G 8704
U-24446-A

SEP 8 1987

Diane R. Nielson
State of Utah
Department of Natural Resources
Division of Oil, Gas, and Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

3 SEP 1987

Dear Diane:

Enclosed is a copy of the approved APD Fact Sheet and the location plat for Wolverine Exploration's, Christmas Meadows #4-34, NESWSE, Sec. 4, T 1N, R 10E, Summit County, Utah.

If you have any questions concerning this matter, please feel free to contact Dan Washington of my staff.

Sincerely,

Deane H. Zeller
District Manager

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/>			5. LEASE DESIGNATION AND SERIAL NO. U-24446-A *
b. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/> SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>			6. IF INDIAN, ALLOTTEE OR TRIBE NAME Not Applicable
2. NAME OF OPERATOR American Quasar Petroleum Company			7. UNIT AGREEMENT NAME Christmas Meadows **
3. ADDRESS OF OPERATOR 201 Main Street, Suite 400, Fort Worth, Texas 76102			8. FARM OR LEASE NAME Christmas Meadows Federal
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)* At surface 874' FSL, 1306' FEL (NE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$) 4-1N-10E S.L.M. At proposed prod. zone			9. WELL NO. 4-34
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 40 Miles South of Evanston, Wyoming			10. FIELD AND POOL, OR WILDCAT Wildcat
10. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drig. unit line, if any)	874'	16. NO. OF ACRES IN LEASE 200	17. NO. OF ACRES ASSIGNED TO THIS WELL 40
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.	N/A	19. PROPOSED DEPTH 6100'	20. ROTARY OR CABLE TOOLS Rotary
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 9092' GR			22. APPROX. DATE WORK WILL START* August 15, 1987

RECEIVED
SEP 8 1987
BUREAU OF LAND MANAGEMENT

24. SIGNED Robert M. Anderson TITLE Authorized Agent DATE July 10, 1987
(This space for Federal or State office use)
PERMIT NO. 08G 8704 43-043-30085 APPROVAL DATE 3 SEP 1987
APPROVED BY Deane H. Zeller TITLE District Manager DATE Sept. 3, 1987
CONDITIONS OF APPROVAL, IF ANY:

*See Instructions On Reverse Side

GLO B.C. 1941

RIO E



SCALE 1"=1000'

GLO B.C. 1941 TIN

THE CHRISTMAS MEADOWS
FEDERAL 4-34
ungraded elev. 9092

1306'

Basis of ELEV.
USGS BM "EVAN"
8161

874'

(Solar Obser.) N 0° 54' 57" E,
2639.55' (measure)

N 89° 33' 41" W (protracted)

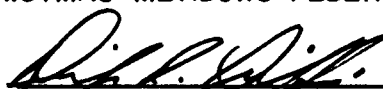
GLO B.C. 1941

CERTIFICATE OF SURVEYOR

STATE OF UTAH
COUNTY OF SUMMIT

} SS

I, DICK R. GRIFFIN of Rock Springs, Wyoming, hereby certify that this map was made from notes taken during an actual survey under my direct supervision on May 9, 1987, and that it shows correctly the location of THE CHRISTMAS MEADOWS FEDERAL 4-34.


UTAH R.L.S. No. 5120

NOTE

- FOUND CORNER
- PROPORTIONED CORNER
- ◇ WELL LOCATION

JOB NO. 1250

PLAT OF DRILLING LOCATION

for
WOLVERINE EXPLORATION CO.

874' F/SL & 1306' F/EL, Section 4
T 1 N, R 10 E of the S.L.M.

Prepared by:

D.R. GRIFFIN & ASSOCIATES
P.O. BOX 1059 (307) 362-5028
ROCK SPRINGS, WYOMING 82901

092919

DIVISION OF OIL, GAS AND MINING

CONFIDENTIAL

SPUDDING INFORMATION

API #43-043-30285

NAME OF COMPANY: WOLVERINE EXPLORATION CO (FORMALLY AMERICAN QUASAR)

WELL NAME: CHRISTMAS MEADOWS FEDERAL 4-34

SECTION SE SE 4 TOWNSHIP 1N RANGE 10E COUNTY Summit

DRILLING CONTRACTOR Burris

RIG # 116

SPUDDED: DATE 9-25-87

TIME 12:30 PM

How Rotary

DRILLING WILL COMMENCE _____

REPORTED BY Bob Anderson - Heitzman Drillsite Services

TELEPHONE #

DATE 9-28-87 SIGNED JRB

AMERICAN QUASAR PETROLEUM COMPANY
Lease #U-24446A, Christmas Meadows Federal #4-34
NESWSE, Section 4, T1N, R10E, SLM
Summit County, Utah

Drilling Prognosis

1. Estimated Tops of Important Geologic Markers:

Tertiary	Surface	Phosphoria	4730'
Base/Tertiary	3000'	Weber	5260'
Thaynes	3460'	Total Depth	6100'
Woodside	4120'		

2. Estimated Depths of Anticipated Water, Oil, Gas or Mineral Formations:

Thaynes	3460'	Oil (Possible)
Phosphoria	4730'	Oil (Primary Objective)
Weber	5260'	Oil (Secondary Objective)

If any shallow water zones are encountered, they will be adequately protected and reported; none anticipated. All potentially productive hydrocarbon zones will be cemented off.

3. Pressure Control Equipment: (Schematic Attached)

Type : 13-3/8" Double Gate Hydraulic with one (1) blind ram (above) and one (1) pipe ram (below) and 13-3/8" annular preventer; equipped with automatic choke manifold and 13-38" casing head. All equipment will be H₂S trimmed for service in sour gas environments.

Pressure Rating : 3000 psi BOP, 3000 psi choke manifold, 3000 psi annular preventer and 3000 psi casing head.

Testing Procedure : The annular preventer will be pressure tested to 50% of the rated working pressure; the BOP and choke manifold will be pressure tested to the rated working pressure or 70% of the internal yield strength of the surface casing, whichever is less, for a period of fifteen (15) minutes upon installation; once every thirty (30) days and/or when flange seals are broken if a "nipple-up" or "nipple-down" takes place.

3. Pressure Control Equipment: Continued

Fill line will be three (3) inches, kill line will be three (3) inches, choke relief line will be three (3) inches. BOP drills and tests will be recorded in the driller's log.

The choke manifold and BOP extension rods with handwheels will be located outside the rig sub-structure. The hydraulic BOP closing unit will be located at least twenty-five (25) feet from the well head. Exact locations and configurations will depend upon the particular rig contracted to drill this hole.

The choke line (the line which connects the BOP stack to the choke manifold) will be as straight as possible and turns, if required, will have a targeted T block if the required BOP stack is three (3) thousand pounds or greater.

A flare line will be installed after the choke manifold, extending 125 feet (minimum) from the center of the drill hole to a separate flare pit.

4. The Proposed Casing and Cementing Program: (All New)

A. Casing Program:

<u>Hole Size</u>	<u>Casing Size</u>	<u>Wt./Ft.</u>	<u>Grade</u>	<u>Joint</u>	<u>Depth Set</u>
26 "	20 "	Steel	Conductor		0- 120'
17-1/2"	13-3/8"	48.0#	H-40	ST&C	0- 350'
12-1/4"	9-5/8"	36.0#	K-55	ST&C	0-3500'
8-3/4"	7 "	23.0#	K-55	LT&C	0-6100'

Casing String(s) will be pressure tested to 0.2 psi/foot, or 1000 psi, whichever is greater.

B. Cementing Program:

Surface Conductor : Approximately 50 sx, circulated to surface.

Surface Casing : Approximately 150 sx Lite + 100 sx Class "H" cement, circulated to surface.

Intermediate Casing : Approximately 1000 sx Lite + 500 sx Class "H" cement, circulated to surface.

4. The Proposed Casing and Cementing Program: Continued

B. Cementing Program:

Production Casing : Lead with approximately 1100 sx
Lite with 0.25 #/sx Flocele; tail
with approximately 100 sx Class
"H" with 0.4% Halad 332.

A greater amount of cement will be used if necessary to ensure that all potentially productive hydrocarbon zones are cemented off. Fill-up to be determined from logs.

5. Mud Program: (Monitor with PVI and Flow Sensor Device)

<u>Interval</u>	<u>Type</u>	<u>Weight</u>	<u>Viscosity</u>	<u>Fluid Loss</u>
0- 350'	Native Mud	8.4-8.6	40-60	No Control
350-3500'	Fresh Water	8.4-8.8	30-40	10-20 cc
3500-6100'	Non-Dispersed	8.6-9.0	36-42	10-15 cc

Sufficient mud inventory will be maintained on location during drilling to handle any adverse conditions that may arise. Inventory will not be less than the required amount needed to drill this well.

Prior to entering the Thaynes Formation, oxygen and H₂S scavengers will be added to the mud system. As a pre-cautionary measure, quantities of Zinc Carbonate and Ironite Sponge will be stored on location should an emergency arise.

6. Evaluation Program:

Logs : FDC-CNL-GR* - 6100' - 350'
DIL-Dipmeter - 6100' - 350'
BHC-Sonic - 6100' - 350'

* pull gamma ray to surface

DST's : Three (3) possible Drill Stem Tests -
one each in Thaynes, Phosphoria,
and Weber Formations.

Cores : None anticipated.

Evaluation Program may change at the discretion of the well-site geologist, with prior approval of the Bureau of Land Management.

6. Evaluation Program: Continued

Stimulation : No stimulation or frac treatment has been formulated for this test at this time. The drill site, as approved, will be of sufficient size to accomodate all completion activities.

Whether the well is completed as a dry hole or as a producer, Well Completion and Recompletion Report and Log (Form 3160-4) will be submitted to the District Office not later than thirty (30) days after the completion of the well or after completion of operations being performed, in accordance with 43 CFR 3164. Two (2) copies of all logs, core descriptions, core analyses, well test data, geologic summaries, sample description, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, will be filed with Form 3160-4. Samples (cuttings, fluids, and/or gases) will be submitted when requested by the District Manager.

7. Abnormal Conditions:

No abnormal temperatures or pressures are anticipated. H₂S may be expected at approximately 3460' and safety equipment will be in operation at 3000'. A Hydrogen Sulfide (H₂S) Contingency Safety Plan has been prepared by an independent H₂S Safety Company and submitted under separate cover. Maximum anticipated bottom hole pressure equals 2700 psi.

8. Drilling Activity and Auxiliary Equipment:

A. Drilling Activity:

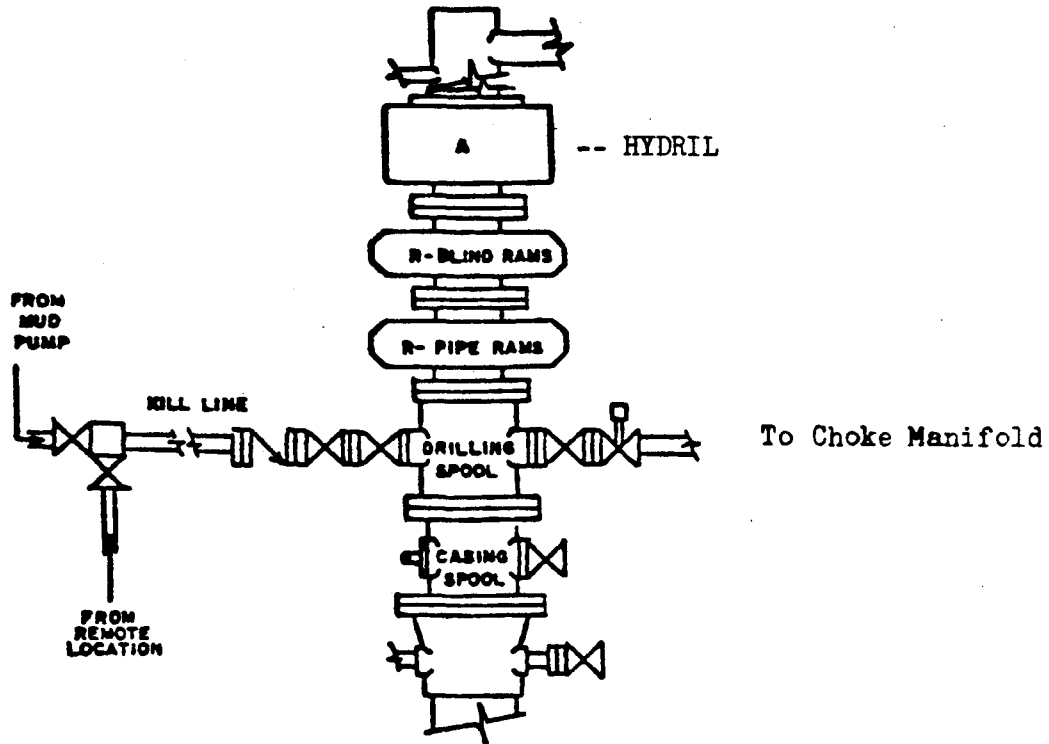
Anticipated Commencement Date : September 1, 1987
Drilling Days : Approximately 30 Days
Completion Days : Approximately 30 days

B. Auxiliary Equipment:

1. A kelly cock will be kept in the string at all times.
2. Periodic checks will be made each tour of the mud system (refer to Item #5 for additional information).
3. A stabbing valve will be kept on the derrick floor to be stabbed into the drill pipe whenever the kelly is not in the string.
4. No bit float will be used.

AFRICAN QUASAR PETROLEUM COMPANY
Lease #U-24446A, Christmas Meadows Federal #4-34
NESWSE, Section 4, T1N, R10E, SLM
Summit County, Utah

3,000 psi WORKING PRESSURE BOP



Test Procedure

- 1) Flush BOP's and all lines to be tested with water.
- 2) Run test plug on test joint and seat in casing head (leave valve below test plug open to check for leak).
- 3) Test the following to rated pressure:
 - a) inside blowout preventer
 - b) lower kelly cock
 - c) upper kelly cock
 - d) stand pipe valve
 - e) lines to mud pump
 - f) kill line to BOP's
- 4) Close and test pipe rams to rated pressure.
- 5) Close and test Hydril to rated pressure.
- 6) Back off and leave test plug in place. Close and test blind rams to rated pressure.
- 7) Test all choke manifold valves to rated pressure.
- 8) Test kill line valves to rated pressure.

BOP ACTUATING SYSTEM

- 1) Accumulator capacity will supply 14 times volume necessary to close all BOP equipment units with a minimum pressure of 203 psi above pre-charge pressure.
- 2) Accumulator back up system, supplied by a secondary power source independent of primary power source, will be provided with sufficient capacity to close all blowout preventers.
- 3) Locking devices will be provided on ram type preventers.
- 4) Primary BOP actuating control will be hydraulic and located either in the dog house or on the rig floor. Back up control will be provided by hand-wheel manual operation of BOP.

CHOKE MANIFOLD

All valves and fittings will be rated at 3000# working pressure.

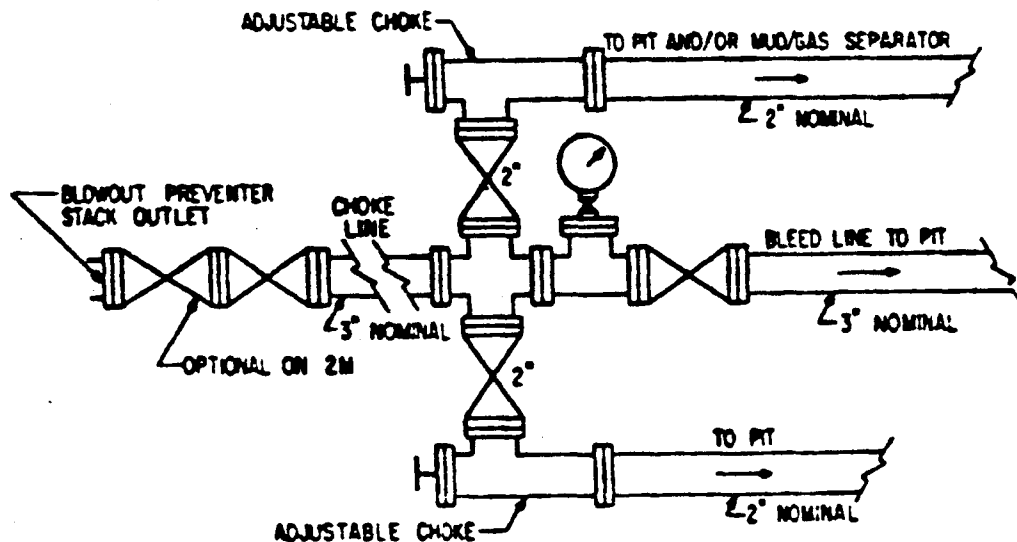


FIG. 3.A.1
TYPICAL CHOKE MANIFOLD ASSEMBLY

BLOWOUT PREVENTER DRILLS

Blowout Preventer Drills will be held once each week.

The simulated blowout drills should be performed without advance notice to the driller. The drills should be directed toward training the rig crew to detect an impending blowout promptly and to close in the well rapidly during the following situations: (1) while on bottom drilling; (2) while making a trip.

Alertness for early detection and control of a kick can be measured by the time required for: (1) the driller to notice the change in well conditions; and (2) closing in a well properly.

A procedure for simulating an impending blowout situation on a rig equipped with a recording pit device should be as follows:

1. The float in the mud pit is raised by the tool pusher. This will indicate on the instrument at the driller's position that the well is coming in. Time will be started.
2. The driller will give notice that he has seen the change of pit level by giving a signal. The driller's reaction time to note the change will be stopped at this signal.
3. The driller's reaction time should be recorded and reported as a part of the blowout drill.

ACCUMULATOR TEST PROCEDURE

The accumulator is to be tested weekly.

1. Turn off the hydraulic pump and record the pressure.
2. Close all BOP's and hydraulic valves, simultaneously.
3. Record the time required for the preventers to close.
4. Record the final accumulator pressure.
5. Turn the hydraulic pumps back on and open all preventers.

The test must pass the following criteria:

- a) The minimum accumulator pressure after closing all preventers will be not less than 1200#.
- b) The maximum time to close all preventers simultaneously will not exceed 20 seconds.

AMERICAN QUASAR PETROLEUM COMPANY
Lease #U-24446A, Christmas Meadows Federal #4-34
NESWSE, Section 4, T1N, R10E
Summit County, Utah

Multi-Point Surface Use and Operations Plan

1. Existing Roads: Refer to Map "A" (shown in RED)
 - A. The proposed well site is staked and two 200-foot reference stakes are present.
 - B. To reach the location from the town of Evanston, Wyoming; proceed south approximately 31.3 miles on Wyoming/Utah Highway 150 (an existing, paved highway), thence southeast approximately 1.6 miles on Forest Road #057 (crowned & ditched with a gravel surface), thence northeast approximately 1700 feet and southeast approximately 5000 feet to the proposed Christmas Meadows Federal #4-34 well location.
 - C. Access Roads - refer to Maps "A" and "B".
 - D. Access roads within a one-mile radius - refer to Map "B".
 - E. Existing Forest Service Road #057 will be maintained in the same or better condition as existed prior to the commencement of operations (at the direction of the U.S. Forest Service/Evanston Ranger District) and said maintenance will continue until final abandonment and reclamation of the well location.
2. Planned Access Roads: Refer to Map "B" (Shown in GREEN)

Approximately 6700 feet of new road construction will be required for access to the proposed Christmas Meadows Federal #4-34 well location.

- A. Width - 16-foot sub-grade running surface, crowned & ditched, for drilling & completion operations.
- B. Maximum grade - 10% or less.
- C. Turnouts - traffic turnouts will be constructed along the access route according to U.S. Forest Service specifications. Please refer to the road design and diagram(s) for specific information in this regard. The road design and diagram(s) will be submitted to the BLM and Forest Service under separate cover.
- D. Drainage design - road will be crowned and ditched according to U.S. Forest Service specifications. Please refer to the road design and diagram(s) for specific information in this regard.
- E. Culverts, cuts and fills - same as Items 2C and 2D. Cuts and fills will be shown on the road design and diagram(s).

2. Planned Access Roads: Continued

- F. Surfacing material - if production is established, gravel will be applied to the road surface according to U.S. Forest Service specifications. Gravel will be obtained from the Sage Draw pit located in the NWSW, Section 16, T2N, R10E. A Special Use Permit will be obtained from the Evanston Ranger District, U.S.F.S prior to utilization of materials from this source.
- G. Gates, cattleguards or fence cuts - none required for drilling. If production is established, the entire location will be fenced and a cattleguard will be required at the junction of the access road and well pad.
- H. The new access road is flagged.

3. Location of Existing Wells Within a One-Mile Radius:

- A. Water wells - none known
- B. Abandoned wells - none
- C. Temporarily abandoned wells - none
- D. Disposal wells - none
- E. Drilling wells - none
- F. Producing wells - none
- G. Shut-in wells - none
- H. Injection wells - none
- I. Monitoring wells - none

4. Location of Existing and/or Proposed Facilities Owned by American Quasar Petroleum Company Within a One-Mile Radius:

- A. Existing.
 - 1. Tank batteries - none
 - 2. Production facilities - none
 - 3. Oil gathering lines - none
 - 4. Gas gathering lines - none
- B. New Facilities Contemplated.
 - 1. In the event commercial production is established, the location of the production facilities will be decided through a joint meeting between representatives of American Quasar Petroleum Company, the BLM and the U.S. Forest Service. The production facilities will be located on the disturbed portion of the well pad in such a manner as to best satisfy the combined engineering requirements and preserve the environmental aesthetics.

4. Location of Existing and/or Proposed Facilities Owned by American Quasar Petroleum Company Within a One-Mile Radius:

B. New Facilities Contemplated. Continued

2. Production facilities will require an area approximately 300' X 150'. An "as-built" diagram of the production facility layout will be submitted to the Authorized Officer via Sundry Notice (Form 3160-5) upon completion of installation operations.
 3. Installation of the proposed production facilities will be on the disturbed portion of the well pad. Construction materials needed for installation of the production facilities will be obtained from the site; any additional materials needed will be purchased from a local supplier. A dike will be constructed completely around the production facilities (i.e., production tanks, produced water tanks and/or heater/treater). The dikes will be constructed of compacted subsoil, be impervious, hold 1.5 times the storage capacity of the tank battery, and be independent of the back cut.
 4. All permanent (on site for six months or longer) above-the-ground structures will be painted Shale Green (Munsell standard color 5Y 4/2). All facilities will be painted within six (6) months of installation. Facilities required to comply with OSHA requirements for safety reasons will be excluded.
- C. The entire location will be fenced "Sheep-Tight" with wire mesh and two (2) top strands of barbed wire held in place by side posts and corner "H" braces in order to protect livestock and wildlife. The fence will be installed as prescribed in the 1978 USGS Publication: Surface Operating Standards for Oil and Gas Development.
- D. During drilling and subsequent operations, all equipment and vehicles will be confined to the access road and any additional areas specified in the A.P.D.
- E. Reclamation of disturbed areas no longer needed for operations will be accomplished by grading, leveling and seeding as recommended by the Evanston Ranger District, U.S. Forest Service.

5. Location and Type of Water Supply:

- A. Water for drilling will be obtained from the Stillwater Fork of the Bear River at a point located in the NWSE, Section 32, T2N, R10E, SLM, Summit County, Utah. An Application for Permit to Appropriate Surface Water will be filed with the Office of the Utah State Engineer prior to diversion.
- B. Water will be trucked over existing roads from the point of diversion to the proposed Christmas Meadows Federal #4-34 well location. No new construction will be required on/along the proposed water haul route. A Special Use Permit will be obtained for that portion of the access road/water-haul route crossing off-lease U.S. Forest Service lands.
- C. No water well will be drilled on this location.

6. Source of Construction Materials:

- A. No off-site construction materials will be needed for well pad construction; surface and subsurface soils will be sufficient. Refer to Item #2F regarding construction materials required on the access road.
- B. No construction materials will be taken from Indian lands.
- C. If commercial production is established, any construction materials needed for installation of production facilities (other than those obtained from the site) will be obtained from either the U.S. Forest Service or from a commercial source (refer to Item #'s 2F and 6A).
- D. No new access roads for construction materials are anticipated.

7. Methods of Handling Waste Materials:

- A. Cuttings - the cuttings will be deposited in the reserve pit.
- B. Drilling fluids - contained in the reserve pit. The reserve pit will be designed to prevent the collection of surface runoff and will be constructed with a minimum of one-half (1/2) the total depth below the original ground level on the lowest point within the pit. Upon termination of drilling and completion operations, the drilling fluids will be disposed of according to U.S. Forest Service specifications and Utah Division of Environmental Health Sciences rules and regulations.

7. Methods of Handling Waste Disposal: Continued

- C. Produced fluids - hydrocarbons produced during completion operations will be placed in test tanks on the location. Water produced during completion operations will be put into the reserve pit as per NTL-2B. Any spills of oil, gas, salt water or other noxious fluids will be cleaned up and removed to an approved disposal site.
- D. Sewage - portable, self-contained chemical toilets will be provided for human waste disposal. The toilet holding tanks will be pumped as necessary, and the contents disposed of in an approved sewage disposal facility.
- E. Garbage and other waste material - all garbage and inflammable wastes will be contained in a portable, animal-proof trash container and disposed of weekly at the nearest off-forest, approved sanitary landfill. No trash will be placed in the reserve pit.
- F. After the rig moves out, all materials will be cleaned up and no adverse materials will be left on the location. Any open pits will be fenced during the drilling operation and the fencing maintained until such time as the location is reclaimed (Refer to Item #4C).

8. Ancillary Facilities:

None

9. Wellsite Layout:

- A. Figure #1 shows the drill site layout as staked. Cross sections have been drafted to visualize the planned cuts and fills across the location (Refer to Figure #2). Approximately eight (8) inches of topsoil will be stockpiled for future reclamation of the well site. Refer to Figure #1 for the location of the topsoil stockpiles.
- B. Figure #1 is a diagram showing the rig layout. No permanent living facilities are planned. There will be three trailers on location; one each for the mud logger, geologist and toolpusher.
- C. An "as-built" diagram showing the production facilities layout will be submitted via Sundry Notice upon completion of installation operations.

9. Wellsite Layout: Continued

- D. Upon construction of the reserve pit, a determination will be made by a U.S. Forest Service representative or an approved soils scientist as to the need for a pit liner. Should soil conditions warrant, a pit liner will be installed according to U.S. Forest Service specifications. A flare pit will be constructed on location as shown on Figure #1.

10. Plans for Reclamation of the Surface:

- A. Backfilling, leveling and re-contouring are planned as soon as the weather allows after the reserve pit has dried. Waste and spoils materials will be disposed of immediately upon completion of drilling and workover activities. If production is established, the unneeded areas of the location will be reclaimed as soon as the weather allows after the reserve pit has dried. For production, the fill slopes will be reduced from a 1.5:1 to a 3:1 slope and the cut slopes will be reduced from a 2:1 to a 3:1 slope by pushing the fill material back into the cut.
- B. Upon completion of backfilling, leveling and re-contouring, the stockpiled topsoil will be evenly spread over the reclaimed area(s). All disturbed surfaces (including the access road and well pad areas) will be scarified and then reseeded with the seed mixture recommended by the U.S. Forest Service. Seed will be drilled on the contour to an approximate depth of one-half (1/2) inch. Fall seeding will be completed after September 1 and prior to ground frost. If applicable, spring seeding will be completed after the frost has left the ground and prior to May 15.
- C. The reserve pit will be fenced "Sheep Tight" on three (3) sides prior to commencement of drilling operations. If the well is a dry hole the fourth side will be fenced upon rig removal and said fencing will be maintained until satisfactory reclamation of the well location. If the well is productive the entire location will be fenced. Refer to item #4C for additional information.
- D. If any oil is on the pits and is not immediately removed after operations cease, the pit containing the oil or other adverse substance(s) will be flagged overhead or covered with wire mesh until such time as the adverse substance(s) have been removed.

10. Plans for Reclamation of the Surface: Continued

- E. The reclamation operations will begin after the drilling rig is removed. Removal of oil or other adverse substances will begin immediately or the affected area(s) will be flagged and/or fenced. Other clean-up will be done as needed. Planting and revegetation attempts are considered best in the Fall, 1988, unless requested otherwise by the U.S. Forest Service.

11. Surface Ownership:

The well site and proposed access road are situated on surface owned by the United States of America and administered by:

U.S. Forest Service
Wasatch-Cache National Forest
Evanston Ranger District
P.O. Box 1880
Evanston, Wyoming 82930-1880
(307) 789-3194

12. Other Information:

- A. General Description of the Project Area: The project area is situated within the Wasatch-Cache National Forest in an area of Northern Utah locally known as Christmas Meadows. The proposed drill site is located east of the Stillwater Fork of the Bear River, east of the Hayden Fork of the Bear River, west of the East Fork of the Bear River, south of Lily Lake, north of Scow Lake, and north of the High Uintas Primitive Area. This area is characterized by semi-mountainous terrain typical of the Uinta Mountains of Utah and Wyoming. Generally, flora consists of sheep fescue, Wheeler bluegrass, spike trisetum, lupine, Oregon grape, bearberry, wild strawberry, common juniper, aspen and lodgepole pine. Fauna consists of elk, mule deer, black bear, antelope, coyotes, rabbits, raptors, and various smaller vertebrates and invertebrates.
- B. Surface Use Activities: The primary surface use is for timber production, livestock grazing, and recreation.
- C. Proximity of Water, Occupied Dwellings, Archaeological, Historical or Cultural Sites:
1. The closest source of permanent water is the Stillwater Fork of the Bear River located approximately 2000 feet to the southwest.

12. Other Information: Continued

- C. Proximity of Water, Occupied Dwellings, Archaeological, Historical or Cultural Sites: continued
2. The closest occupied dwellings are located approximately 1.0 miles to the south/southeast in the SESE of Section 9, T1N, R10E, S.L.M.
 3. If in connection with construction operations, American Quasar Petroleum Company, their contractors, subcontractors, or the employees of any of them discover, encounter, or become aware of any objects or sites of cultural value on the affected area, such as historical or prehistorical ruins, graves or grave markers, fossils, or artifacts, American Quasar Petroleum Company will immediately suspend all operations in the vicinity of the cultural value and notify the District Ranger, U.S. Forest Service of the findings. Operations will resume at the discovery site upon receipt of written instructions and authorization by the District Ranger, U.S. Forest Service, Evanston Ranger District, Evanston, Wyoming 82930.
- D. Fire Protection Requirements for Operations on National Forest Lands:
1. American Quasar Petroleum Company, their employees, and subsequent drilling operations will cooperate with the U.S. Forest Service in the event of high hazard fire conditions. Current fire management policy as it applies to dispersed area use will be observed, including any temporary fire closures necessitated by severe weather conditions.
 2. Fire suppression equipment will be readily available on the location and crews will be trained in their use. The District Ranger will be notified as soon as possible in the event of any fire. Notify: Wasatch-Cache Fire Dispatcher - (801) 524-5040; or Evanston District Ranger - (307) 789-3194.

13. Lessee's or Operator's Representative and Certification

Representative:

Heitzman Drill-Site Services*
Dale Heitzman or
Robert M. Anderson
P.O. Drawer 3579
Casper, Wyoming 82602-3579
(307) 266-4840

American Quasar Petroleum
Company
Jess Nunnelee, Prod. Mgr.
201 Main Street, Suite 400
Fort Worth, Texas 76107
(817) 335-4201

13. Lessee's or Operator's Representative and Certification

Representative: Continued

- * Contact for the pre-drill inspection and any additional information regarding this proposal.

Certification:

All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil & Gas Orders, the approved plan of operations, and any applicable Notice to Lessees. American Quasar Petroleum Company will be fully responsible for the actions of their subcontractors. A copy of these conditions will be furnished to the field representative(s) to ensure compliance.

The dirt contractor will be provided with a copy of the Surface Use Plan from the approved Application for Permit to Drill.

This drilling permit will be valid for a period of one year from the date of approval. After permit termination, a new application will be filed for approval for any future operations.

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by American Quasar Petroleum Company, its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

10 July 1987

Date


Robert M. Anderson/Authorized Agent

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE*
(Other instructions on re-
verse side)

Budget Bureau No. 1004-0135
Expires August 31, 1985

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. U-24446A	
2. NAME OF OPERATOR Wolverine Exploration Company		6. IF INDIAN, ALLOTTEE OR TRIBE NAME Not Applicable	
3. ADDRESS OF OPERATOR 400 1st City Bank Tower, 201 Main St., Ft. Worth, TX 76102		7. UNIT AGREEMENT NAME Christmas Meadows	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.) At surface 874' FSL, 1306' FEL (NE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$) 4-1N-10E		8. FARM OR LEASE NAME Federal	
14. PERMIT NO. 43-043-30285		9. WELL NO. 4-34	
15. ELEVATIONS (Show whether DF, RT, GR, etc.) 9092' GR		10. FIELD AND POOL, OR WILDCAT Wildcat	
		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Section 4, T1N, R10E	
		12. COUNTY OR PARISH Summit	
		13. STATE Utah	

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

PULL OR ALTER CASING

MULTIPLE COMPLETE

ABANDON*

CHANGE PLANS

X

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

REPAIRING WELL

ALTERING CASING

ABANDONMENT*

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Wolverine Exploration Company was unable to obtain a permit from the State of Utah for diversion of water from the Bear River drainage system. Therefore, we respectfully request permission to change the drilling water source for the Christmas Meadows Federal #4-34 as follows:

5. Location and Type of Water Supply:

- A. Water for drilling will be obtained from the Bear River at a point in the NE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 3, T12N, R12OW, Uinta County, Wyoming. Wolverine Exploration Company has obtained approval from the Wyoming State Engineer for appropriation of water from the Bear River; Permit #29755.
- B. Water will be trucked over existing roads from the point of diversion to the proposed Christmas Meadows Federal #4-34 well location. No new construction will be required on/along the proposed water haul route. A Special Use Permit will be obtained for that portion of the access road/water-haul route crossing off-lease U.S. Forest Service lands.
- C. No water well will be drilled on this location.

RECEIVED

OCT 1 1987

DIVISION C
OIL & MINING

18. I hereby certify that the foregoing is true and correct

SIGNED

Robert M. Anderson

TITLE Authorized Agent

DATE 9/23/87

(This space for Federal or State office use)

APPROVED BY

CONDITIONS OF APPROVAL, IF ANY:

TITLE

ACCEPTED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING

DATE: 10-6-87

*See Instructions on Reverse Side

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE
(Other instructions
verse side)

Form approved.
Budget Bureau No. 1004-0135
Expires August 31, 1985

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. U-24446A	
2. NAME OF OPERATOR Wolverine Exploration Company		6. IF INDIAN, ALLOTTEE OR TRIBE NAME 100703	
3. ADDRESS OF OPERATOR 400 1st City Bank Tower, 201 Main St., Ft. Worth, TX 76102		7. UNIT AGREEMENT NAME Christmas Meadows	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.) At surface 874' FSL, 1306' FEL (NE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$) 4-1N-10E		8. FARM OR LEASE NAME Federal	
14. PERMIT NO. 43-043-30285		9. WELL NO. 4-34	
15. ELEVATIONS (Show whether DF, RT, GR, etc.) 9092' GR		10. FIELD AND POOL, OR WILDCAT Wildcat	
		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Section 4, T1N, R10E	
		12. COUNTY OR PARISH Summit	
		13. STATE Utah	

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input checked="" type="checkbox"/>	(Other) <input type="checkbox"/>	(Other) <input type="checkbox"/>
(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Wolverine Exploration Company respectfully requests permission to change the approved Drilling Program as shown on the attached.

RECEIVED
OCT 1 1987
DIVISION OF OIL
GAS & MINING

18. I hereby certify that the foregoing is true and correct

SIGNED Robert M. Anderson

TITLE Authorized Agent

DATE 9/25/87

(This space for Federal or State office use)

APPROVED BY _____
CONDITIONS OF APPROVAL, IF ANY:

TITLE _____

ACCEPTED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING

Federal approval of this action
is required before commencing
operations

*See Instructions on Reverse Side

DATE 10-6-87
BY John R. Day

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

WOLVERINE EXPLORATION COMPANY

Lease # U-24446A, Christmas Meadows #4-34 Federal
NE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 4, T1N, R10E
Summit County, Utah

Revision to Approved Drilling Prognosis

Wolverine Exploration Company respectfully requests permission to change the approved Drilling Program as follows:

3. Pressure Control Equipment:

The choke manifold will be connected to a blind flange between the blind and pipe rams rather than to a separate drilling spool as shown in the Schematic. This blind flange is an integral part of the BOP stack and has a double outlet for connection of the choke manifold and a kill line from the mud pumps. In addition, the approved Schematic shows a connection "from remote location" on the mud pump kill line. This connection will not be present on the actual BOP assembly employed by Burris Rig #116.

4. The Proposed Casing and Cementing Program: (All New)

A. Casing Program:

Hole Size	Casing Size	Wt./Ft.	Grade	Joint	Depth Set
26 "	20 "	Steel	Conductor		0- 45'
17-1/2"	13-3/8"	48.0#	H-40	ST&C	0- 650'
12-1/4"	9-5/8"	36.0#	K-55	ST&C	0-3500' *
8-3/4"	7 "	23.0#	K-55	LT&C	0-6100'

Casing string(s), except conductor, will be pressure tested to 0.2 psi/ft, or 1000 psi, whichever is greater.

* Contingency string to be set only if required to shut off water flows downhole or otherwise maintain hole integrity below surface casing shoe.

B. Cementing Program:

Surface Conductor : Approximately 9 yards, circulated to surface.

Surface Casing : Approximately 300 sx Lite + 200 sx Class "H" cement, circulated to surface.

Intermediate Casing : Approximately 1000 sx Lite + 500 sx Class "H" cement, circulated to surface, if intermediate casing is set.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPL
(Other instructions
verse side)

TE
re

Form approved.
Budget Bureau No. 1004-0135
Expires August 31, 1985

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. U-24446A
2. NAME OF OPERATOR Wolverine Exploration Company		6. IF INDIAN, ALLOTTEE, OR TRIBE NAME 100705 Not Applicable
3. ADDRESS OF OPERATOR 400 1st City Bank Tower, 201 Main St., Ft. Worth, TX 76102		7. UNIT AGREEMENT NAME Christmas Meadows
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface 874' FSL, 1306' FEL (NE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$) 4-1N-10E		8. FARM OR LEASE NAME Federal
14. PERMIT NO. 43-043-30285		9. WELL NO. 4-34
15. ELEVATIONS (Show whether DF, RT, GR, etc.) 9092' GR		10. FIELD AND POOL, OR WILDCAT Wildcat
		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Section 4, T1N, R10E
		12. COUNTY OR PARISH Summit
		13. STATE Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) <input type="checkbox"/>	(Other) <input type="checkbox"/>
(Other) Notice of Spud <input checked="" type="checkbox"/>		(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)	

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) *

Sullivan's Rathole Drilling Service of Rock Springs, Wyoming, spudded the Christmas Meadows Federal #4-34 well at 11:00 AM on Sunday, September 20, 1987. Sullivan's drilled a 26-inch hole to 45 feet, set 20-inch conductor and cemented to surface with 9 yards of cement on Tuesday, September 22, 1987. Extremely difficult drilling was encountered due to large boulders in the subsurface; therefore, we were unable to set the 120 feet of surface conductor as originally approved in the Application for Permit to Drill. Burris Rig #116 was moved onto the location starting on Wednesday, September 23, rigged up on Thursday, September 24, and should commence drilling on Friday, September 25, 1987.

OCT 1 1987

18. I hereby certify that the foregoing is true and correct

SIGNED <u>Robert M. Anderson</u>	TITLE <u>Authorized Agent</u>	DATE <u>9/25/87</u>
(This space for Federal or State office use)		
APPROVED BY _____	TITLE _____	DATE _____
CONDITIONS OF APPROVAL, IF ANY:		

*See Instructions on Reverse Side

DOUBLE JACK TESTING & SERVICES, INC

B.O.P. Test Report

B.O.P. Test Performed on (date) September 30, 1987

Oil Company Triton

Well Name & Number Christmas Meadows 4-34

Location _____

Township IN

Range 10E

County Summit

Drilling Contractor Burris 116

Oil Company Site Representative _____

Oil Tool Pusher _____

Tested out of Evanston, Wyoming

Notified Prior to Test Utah Oil & Gas witnessed test

Copies of This Test Report Sent to: Site Representative

Utah Oil & Gas

B.L.M.

Original Chart & Test Report on File at: Double Jack Office

Tested by: Double Jack Testing & Services, Inc.
108 Parkview Road
P.O. Box 2097
Evanston, Wyoming 82930

RECEIVED
OCT 13 1987

DIVISION OF
OIL, GAS & MINING

Double Jack Testing & Services Inc.

P.O. Box 2097
Evanston, Wyoming 82930
(307) 789-9213

FIELD
TICKET 5464

DATE

7-10-87

OPERATOR

COUNTY

STATE

Utah

SECTION

4

RIG NAME AND #

Baker 116

WELL NAME AND NO.

Chapman Meadows 4-34

TOWNSHIP

12

RANGE

10E

EQUIPMENT TESTED

RAMS	250 psi	15 mins	3000 psi	15 mins
RAMS	250 psi	15 mins	3000 psi	15 mins
RAMS				
ANNULAR				
B.O.P.	250 psi	15 mins	1500 psi	15 mins
CHOKE				
LINE	250 psi	15 mins	3000 psi	15 mins
KILL				
LINE	250 psi	15 mins	3000 psi	15 mins
UPPER				
KELLY	250 psi	15 mins	3000 psi	15 mins
LOWER				
KELLY	250 psi	15 mins	3000 psi	15 mins
SAFETY				
VALVES	250 psi	15 mins	3000 psi	15 mins

ADDITIONAL TESTS & COMMENTS

tightened pipe ram door.
repacked stem packing on H&R valve
changed out check valve on kill line

ran Accumulator precharge check

low pressure to 2500 shut off power sources
shut pipe rams, blind rams, Hydril, H&R valve, accumulator
on Accumulator with a shut in time of 18 sec, opened
blind rams with a final accumulator pressure of 1400 psi

test unit received by Utah Well Services Company

CLOSING UNIT PSI 2500 psi
TESTED CASING HEAD VALVE yes

CLOSING TIME OF RAMS 6 sec

SET WEAR RING

HYDRIL 12 sec

SET WEAR RING (AT 1000 PSI)

COMPANY

LEASE D WELL NAME #

DATE OF TEST

RIG # AND NAME

TEST# TIME

4:00 AM to 7:30 hooked up Xomey lines, set manual hole
rigged up floor

test plug rig to test

2 8:00 Leak on pipe ram down

3 8:10-8:35 250 psi test Blind rams inside manual or Kill
line inside manual or choke line

8:35-8:40 3000 psi "

3 Leak on check valve cannot get to seal, tore
apart workover seal + seat, put back together, tried
retesting.

4 10:05-10:30 test Hybrid Lower TIL valves, manual or Kill line
HCB valves 250 psi

10:30-10:35 3000 psi "

5 Leak on check valve decided to replace
picked up Kelly

6 11:15-11:30 250 psi test Upper Kelly

11:30-11:45 3000 psi "

7 12:05-12:20 250 psi test manual valves on manifold

12:30-12:45 3000 psi

3000 psi pressured up on manual chokes
lost 600 lbs in 5 mins

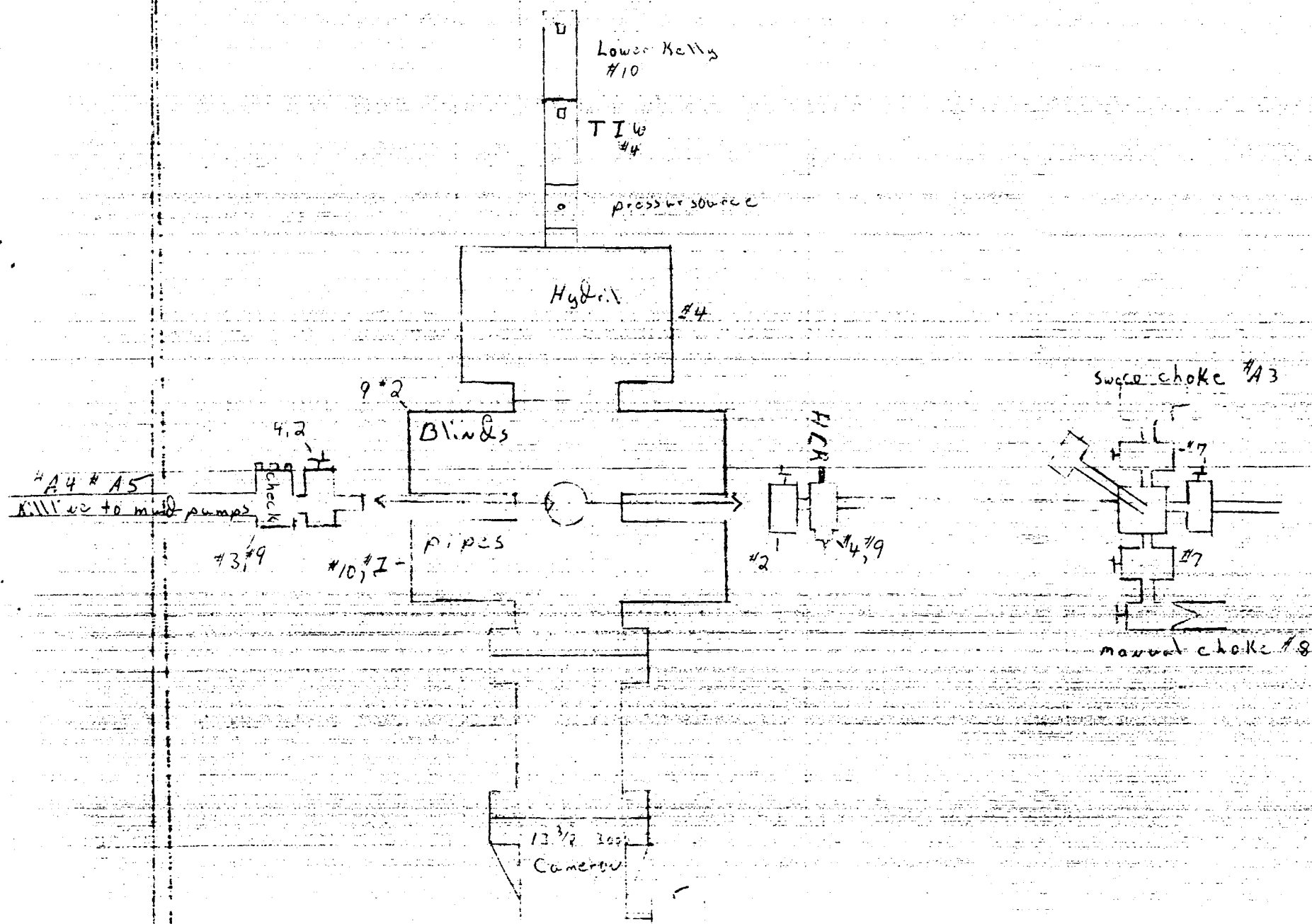
waited on check valve replaced

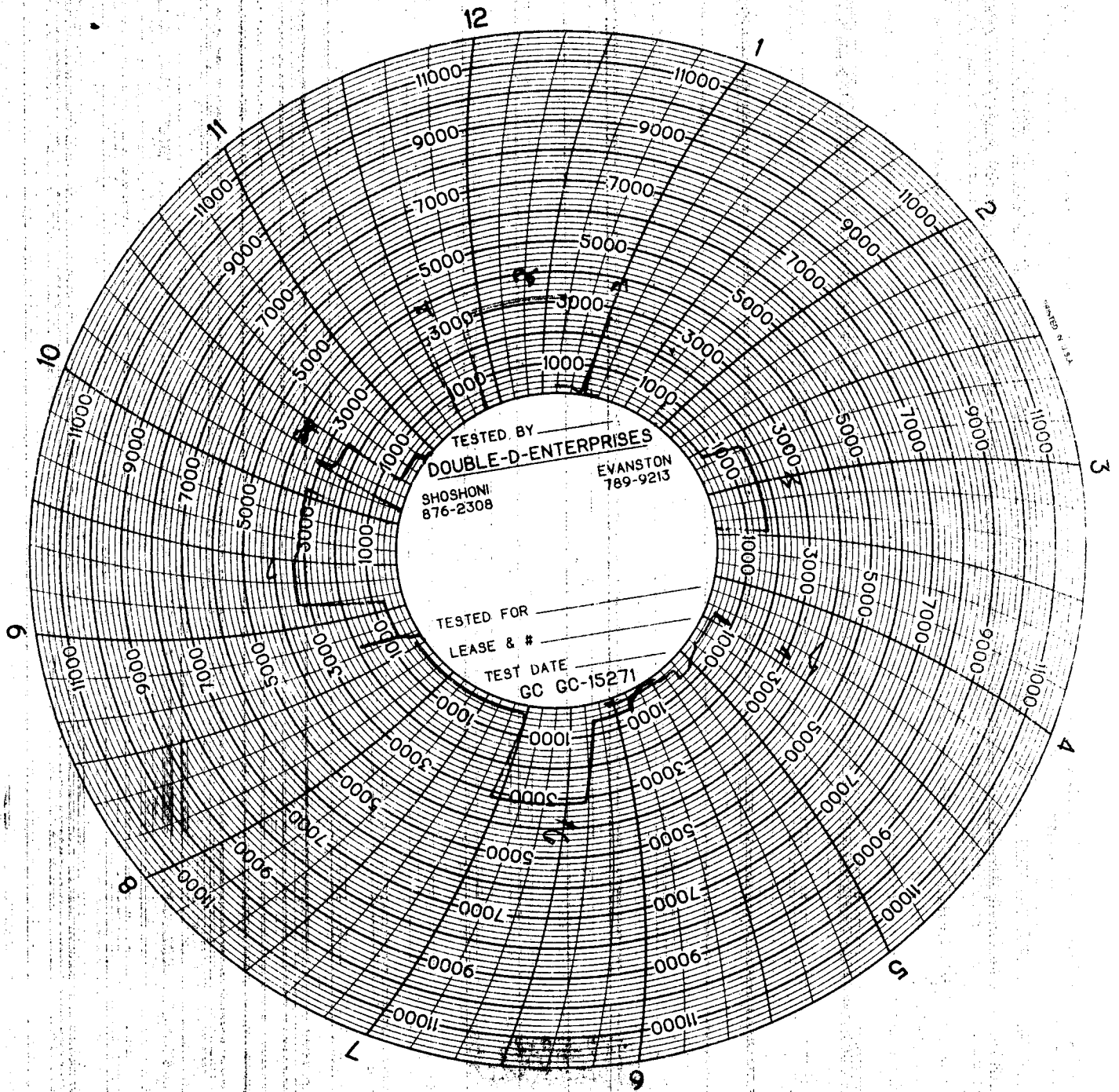
8 250 psi test Blind rams, check valves on Kill line
HCB valve on choke line 15 mins

3000 psi 15 mins

9 250 psi test pipe rams 15 mins Lower Kelly

3000 psi test pipe rams 15 mins Lower Kelly





**CALIBRATED
CHARTS**
STANDARD, INC.

METER NUMBER

TIME PUT ON

DATE PUT ON

19

TUBES OR SIZE

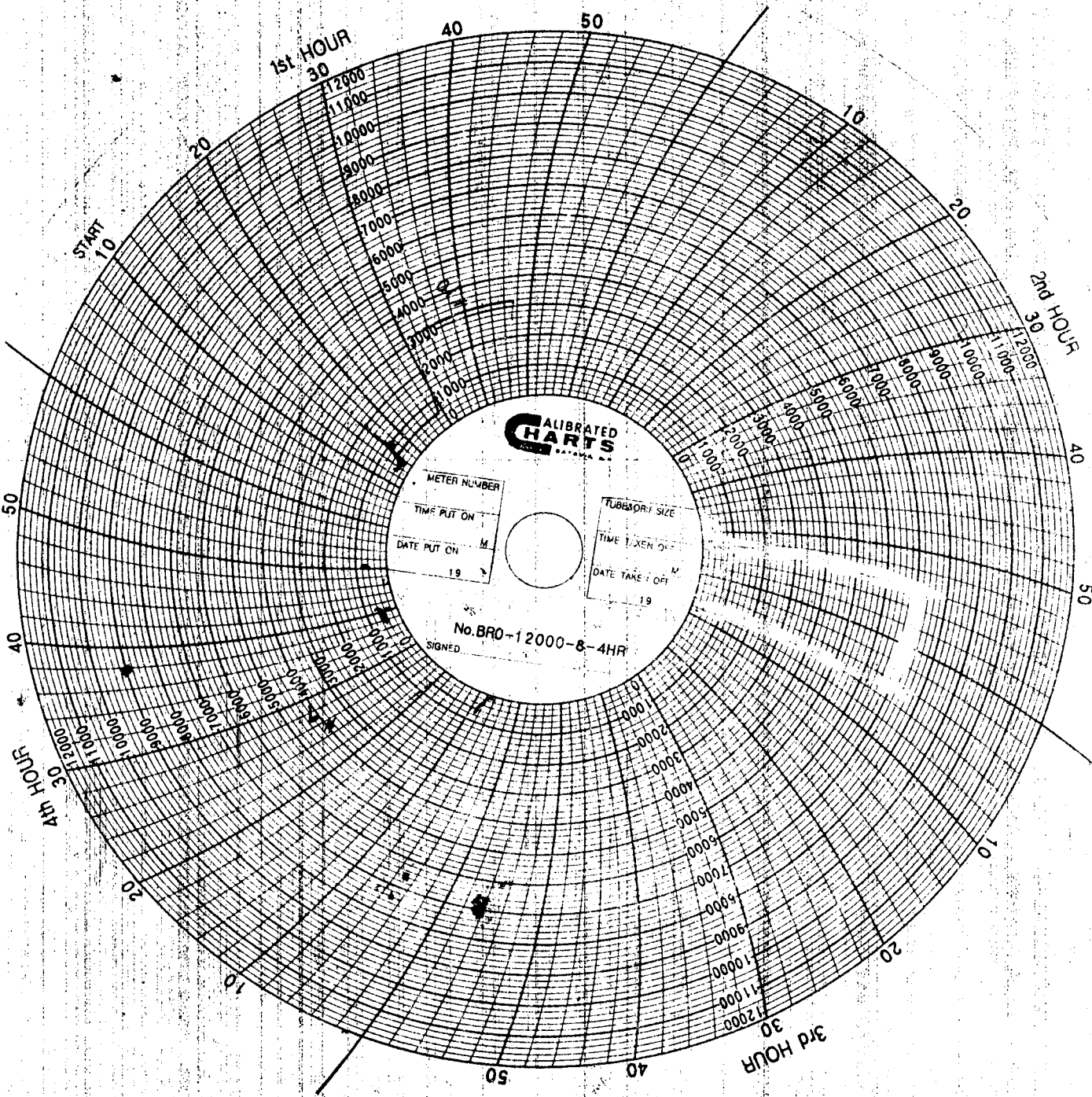
TIME TAKEN OFF

DATE TAKEN OFF

19

No. BR0-12000-8-4HR

SIGNED





**Surface Inspections
Federal - State - Fee Locations**

HEITZMAN DRILL - SITE SERVICES

P.O. BOX 3579

CASPER, WYOMING 82602

(307) 266-4840 OFFICE

(307) 473-1268 HOME

RCC UNIT # 2555

ROBERT M. ANDERSON

RCC NUMBERS

CASPER: Custom Radio 234-1223

EVANSTON: Commercial Communications 789-7379

GILLETTE: Star Communications 682-5193

JACKSON: Mobile Tone 733-8222

ROCK SPRINGS: Commercial Communications 382-5580

WORLAND: Worland Services 347-8428

RECEIVED
NOV 05 1987

FILING FOR WATER IN THE
STATE OF UTAH

SEP 01 1987

Rec. by

Fee Rec.

Receipt #

Microfilmed

Roll #

DIVISION OF
OIL, GAS & MINING

APPLICATION TO APPROPRIATE WATER
TEMPORARY

For the purpose of acquiring the right to use a portion of the unappropriated water of the State of Utah, application is hereby made to the State Engineer, based upon the following showing of facts, submitted in accordance with the requirements of the Laws of Utah.

* WATER USER CLAIM NO. 21 — 1580

* APPLICATION NO. X T62801

1. PRIORITY OF RIGHT: August 28, 1987

* FILING DATE: August 28, 1987

2. OWNER INFORMATION

Name(s): American Quasar Petroleum Company * Interest: _____ %

Address: 400 First City Bank Tower, 201 Main Street; Fort Worth, Texas 76102

Is the land owned by the applicant? Yes _____ No XXX

(If "No", please explain in EXPLANATORY section.)

3. QUANTITY OF WATER: 600,000 gallons ~~845~~ and/or 1.84 ~~ac-ft~~ ¹⁰⁻²⁻⁸⁷

4. SOURCE: Underground Water Well * DRAINAGE: _____

which is tributary to _____

which is tributary to _____

POINT(S) OF DIVERSION: _____ COUNTY: Summit County, Utah

1000' FSL, 1345' FEL of Section 4, T1N, R10E, Salt Lake Meridian

N 1000 W 1345 SE Cor. Sec. 4, T1N, R10E
Description of Diverting Works: Drill seven inch hole to approximately 1000 feet.

* COMMON DESCRIPTION: Christmas Meadows Ant
4-34 - 1N 10E S-4 43-043-30285

5. POINT(S) OF REDIVERSION

The water will be rediverted from Not Applicable at a point: _____

Description of Rediverting Works: _____

6. POINT(S) OF RETURN

The amount of water consumed is 600,000 gallons ~~845~~ or _____ ac-ft

The amount of water returned is -0- gallons ~~845~~ or _____ ac-ft

The water will be returned to the natural stream/source at a point(s): not applicable.

7. STORAGE - Not Applicable

Reservoir Name: _____ Storage Period: from _____ to _____

Capacity: _____ ac-ft. Inundated Area: _____ acres

Height of dam: _____ feet

Legal description of inundated area by 40 acre tract: _____

* These items are to be complete by Division of Water Rights

Appropriate

8. List any other water rights which are or will supplement this application None

9. NATURE AND PERIOD OF USE

Stockwatering:	From _____	to _____
Domestic:	From _____	to _____
Municipal:	From _____	to _____
Mining:	From _____	to _____
Power:	From _____	to _____
Other:	From <u>January 1</u>	to <u>December 31</u>
Irrigation:	From _____	to _____

10. PURPOSE AND EXTENT OF USE

Stockwatering (number and kind): _____
Domestic: _____ Families and/or _____ Persons
Municipal (name): _____
Mining: _____ Mining District in the _____ Mine
Ores mined: _____
Power: Plant name: _____ Type: _____ Capacity: _____
Other (describe): Drilling of oil/gas well.
Irrigation: _____ acres. Sole supply of _____ acres
Legal description of irrigated area by 40 acre tract: _____

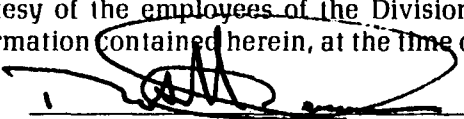
11. PLACE OF USE

Legal description of areas of use other than irrigation, if not the same as irrigated area above, by 40 acre tract: oil/gas well location: NE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 4, T1N, R10E, S.L.M.

12. EXPLANATORY

The following is set forth to define more clearly the full purpose of this application. (Use additional pages of same size if necessary): Approximately 600,000 gallons of water will be required to drill oil/gas well located in NE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 4, T1N, R10E, S.L.M. Water will be used over a period of approximately thirty days beginning on or about September 15, 1987. Well to be located on U.S. Forest Service surface.

The applicant(s) hereby acknowledges that he/she/they are a citizen(s) of the United States of America or intends to become such a citizen(s). The quantity of water sought to be appropriated is limited to that which can be beneficially used for the purposes herein described. The undersigned hereby acknowledges that even though he/she/they may have been assisted in the preparation of the above-numbered application through the courtesy of the employees of the Division of Water Rights, all responsibility for the accuracy of the information contained herein, at the time of filing, rests with the applicant(s).



Signature of Applicant(s)

Robert M. Anderson/Authorized Agent

RECEIVED

STATE ENGINEER'S ENDORSEMENT


WATER RIGHT NUMBER: 21 - 1580

APPLICATION NO. T62801

1. August 28, 1987 Application received.
 2. October 30, 1987 Application designated for APPROVAL by RMF and KLJ.
 3. Comments:
-
-

Conditions:

This application is hereby APPROVED, dated November 3, 1987, subject to prior rights and this application will expire on November 3, 1988.


Robert L. Morgan, P.E.
State Engineer

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TB
(Other instruct
verse side)

Form approved.
Budget Bureau No. 1004-0135
Expires August 31, 1985

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL ☒ GAS WELL ☐ OTHER ☐ NOV 6 1987
2. NAME OF OPERATOR
Wolverine Exploration Company
3. ADDRESS OF OPERATOR
400 1st City Bank Tower, 201 Main St., Ft. Worth, TX 76102
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*
See also space 17 below.)
At surface
874' FSL, 1306' FEL (NE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$) 4-1N-10E

14. PERMIT NO. 43-043-30285
15. ELEVATIONS (Show whether DF, RT, GR, etc.)
9092' GR

5. LEASE DESIGNATION AND SERIAL NO.

U-24446A Dr 1.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

Not Applicable

7. UNIT AGREEMENT NAME

Christmas Meadows

8. FARM OR LEASE NAME

Federal 110910

9. WELL NO.

4-34

10. FIELD AND POOL, OR WILDCAT

Wildcat

11. SEC., T., R., M., OR BLK. AND
SURVEY OR AREA

Section 4, T1N, R10E

12. COUNTY OR PARISH 13. STATE

Summit Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF ☐ PULL OR ALTER CASING ☐
FRACTURE TREAT ☐ MULTIPLE COMPLETE ☐
SHOOT OR ACIDIZE ☐ ABANDON* ☒
REPAIR WELL ☐ CHANGE PLANS ☐
(Other) ☐

SUBSEQUENT REPORT OF:

WATER SHUT-OFF ☐ REPAIRING WELL ☐
FRACTURE TREATMENT ☐ ALTERING CASING ☐
SHOOTING OR ACIDIZING ☐ ABANDONMENT* ☒
(Other) ☐

(NOTE: Report results of multiple completion on Well
Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Verbal permission to plug was obtained from Bob Hendricks, BLM, Salt Lake City, Utah, at 0930 hours on October 30, 1987. Plugging operations on the Christmas Meadows Federal #4-34 commenced at 0400 hours on November 1, 1987. Plugs were set as follows:

Plug #1	7680-7400'	94 sx Class "H" Neat
Plug #2	7300-7070'	80 sx Class "H" Neat
Plug #3	6250-6125'	45 sx Class "H" Neat
Plug #4	4750-4650'	45 sx Class "H" Neat
Plug #5	4000-3900'	55 sx Class "H" Neat
Plug #6	3200-3000'	140 sx Class "H" Neat
Plug #7	775- 575'	110 sx Class "H" Neat
	50-Surface	40 sx Class "H" Neat

All plugs were down at 1900 hours on November 1, 1987. Rig released at 0600 hours on November 2, 1987. A tubular dry hole marker will be erected upon removal of the drilling rig from the location.

18. I hereby certify that the foregoing is true and correct

SIGNED

Robert M. Anderson
(This space for Federal or State office use)

TITLE Authorized Agent

DATE 11/3/87

APPROVED BY

CONDITIONS OF APPROVAL, IF ANY:

TITLE

ACCEPTED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING

*See Instructions on Reverse Side

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN DUPLICATE

See other instructions on reverse side

Form approved.
Budget Bureau No. 1004-0137
Expires August 31, 1985

16

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

1a. TYPE OF WELL:		OIL WELL <input type="checkbox"/>		GAS WELL <input type="checkbox"/>		DRY <input checked="" type="checkbox"/>		Other <input type="checkbox"/>							
b. TYPE OF COMPLETION:		NEW WELL <input type="checkbox"/>		WORK OVER <input type="checkbox"/>		DEEP-EN <input type="checkbox"/>		PLUG BACK <input type="checkbox"/>		DIFF. RESER. <input type="checkbox"/>		Other <input type="checkbox"/>			
2. NAME OF OPERATOR Wolverine Exploration Company															
3. ADDRESS OF OPERATOR 400 1st City Bank Tower, 201 Main St., Ft. Worth, Texas 76102															
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)* At surface 874' FSL, 1306' FEL (NE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$) 4-1N-10E At top prod. interval reported below At total depth															
14. PERMIT NO. 43-043-30285						DATE ISSUED 7/17/87									
15. DATE SPUDDED 9/25/87		16. DATE T.D. REACHED 10/30/87		17. DATE COMPL. (Ready to prod.) N/A: Well P&A		18. ELEVATIONS (DF, RKB, RT, GR, ETC.)* 8161' GR		19. ELEV. CASING HEAD							
20. TOTAL DEPTH, MD & TVD 7700' MD; 7688' TVD		21. PLUG, BACK T.D., MD & TVD N/A		22. IF MULTIPLE COMPL., HOW MANY* N/A		23. INTERVALS DRILLED BY →		ROTARY TOOLS 0-7700'		CABLE TOOLS N/A					
24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)* Not Applicable: Well Plugged and Abandoned										25. WAS DIRECTIONAL SURVEY MADE No					
26. TYPE ELECTRIC AND OTHER LOGS RUN DLL-GR, BHC-Sonic, CNL-FDC, Cyberdip, FIL, TVD										27. WAS WELL CORED No					
28. CASING RECORD (Report all strings set in well)															
CASING SIZE		WEIGHT, LB./FT.		DEPTH SET (MD)		HOLE SIZE		CEMENTING RECORD		AMOUNT PULLED					
20" Steel		Conductor		0- 45'		26 "		9 yds. Redi-Mix		None					
13-3/8"		54.5# J-55		0-675'		17-1/2"		450 sx Lite + 250 sx Prem		None					
29. LINER RECORD - Not Applicable															
SIZE		TOP (MD)		BOTTOM (MD)		SACKS CEMENT*		SCREEN (MD)		PACKER SET (MD)					
30. TUBING RECORD - N/A															
SIZE		TOP (MD)		BOTTOM (MD)		SACKS CEMENT*		SCREEN (MD)		PACKER SET (MD)					
31. PERFORATION RECORD (Interval, size and number) Not Applicable						32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.									
						DEPTH INTERVAL (MD)		AMOUNT AND KIND OF MATERIAL USED							
						Not Applicable									
33. PRODUCTION															
DATE FIRST PRODUCTION		PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)						WELL STATUS (Producing or shut-in)							
Not Applicable		Well Plugged and Abandoned						P&A							
DATE OF TEST		HOURS TESTED		CHOKE SIZE		PROD'N. FOR TEST PERIOD		OIL—BBL.		GAS—MCF.		WATER—BBL.		GAS-OIL RATIO	
						→									
FLOW. TUBING PRESS.		CASING PRESSURE		CALCULATED 24-HOUR RATE		OIL—BBL.		GAS—MCF.		WATER—BBL.		OIL GRAVITY-API (CORR.)			
				→											
34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)										TEST WITNESSED BY					
35. LIST OF ATTACHMENTS Drillstem Test Report, Geologic Summary and Zones of Interest															
36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records															
SIGNED		TITLE				DATE									
Robert M. Anderson		Authorized Agent				11/19/87									

*(See Instructions and Spaces for Additional Data on Reverse Side)

37. SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof; cored intervals; and all drill-stem, tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries):				38. GEOLOGIC MARKERS		
FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	MEAS. DEPTH	TOP TRUE VERT. DEPTH
Wasatch	Surface	4690'	Very minor hydrocarbon gas shows were encountered along with dead black asphalt staining: 675-3500'. Small gas show recorded at 3885'.	Tertiary Wasatch	Surface	Surface
Ankareh	4690'	5646'	No shows.	Triassic Ankareh	4694'	4690'
Thaynes	5646'	6460'	No shows.	Thaynes	5642'	5646'
Woodside	6460'	7071'	No shows.	Woodside	6452'	6460'
Phosphoria	7071'	7610'	DST #1: 7065-7213'. Recovered 1116' water cut mud + 800' water cushion. No gas to surface; no significant hydrocarbon shows.	Phosphoria	7086'	7071' (
Weber	7610'	7700'	No shows. Logs indicate porosities of 12-23%, sands probably filled with fresh water.	Pennsylvanian Weber SS	7626'	7610'
				Total Depth	7700'	7688'

DST # 1 Date 10/26/87 Testing Co. HALLIBURTON
 WELL NAME: CHRISTMAS MEADOWS FED. 4-34 - WOLVERINE EXPL. CO.
 Formation: PHOSPHORIA Interval: 7065 - 7213 Wtr. Cushion 800 (SEE REMARKS)
 Hole Size 8½ Packer Size 7 3/4" Drl. Pipe Size 4½ Bbls/Ft .01422
 Drl. Collar Size 6¼/6½ Bbls/Ft .0052 Drlg. Contractor BURRIS DRILLING

Mud Filtrate: Ppm Nitrate --- Ppm Chlorides 150
 Minutes
 Duration
 Preflow 30 Gas to Surf. NGTS Min; Rate -----
 Initial Shutin 30 Fluid to Surf. ---- Min; Rate -----
 Flow Period 30 Mud ----- Min; Wtr ----- Min; Oil ----- Min
 Final Shutin 60

Test Description: IF OPN @ 11:40 AM 1½" in 1 min, 3" in 2 min, 4½" in 3 min, 5½ in 4 min, 8" in 6 min, 8½" in 7 min, 12 3/4" in 10 min, bot of bucket 13" in 11 min. Install ounce gage in 12 min-No recv- Needle moved @ 29 min. Close tool @ 12:10 PM. FF: OPN w/8" BLOW in 5 min, incr to bot of bucket 13". No gage press taken (no working gages).

Orifice Plate Size	Temp.	Minutes from V.O.	Pressure	Rate

Pressure Records (Field Readings) -- Bomb Depth ----- Bottom Hole Temp. 175 (est)

Pre-Flow			Final Flow		
IHP 3361	IFP 3361	FFP 593	ISIP 2565	IFP 613	FFP 866
3444	3444	671	2651	689	1116
Sampler Capacity 2200 Cc's			Sampler Pressure 5 psi Rstv 2.84 Temp 2000 ppm 68°		
Cu Ft Gas	Cc's Oil	Cc's Water	Cc's (Other) 2100 wcm		

Sampler Recovery (Water): Ppm Nitrate ----- Ppm Chlorides NOT RUN

Pipe Recovery: 1116' WCM (900 ppm CL) + 800' WTR CUSHION (Fluid spl caught above sampler was higher vis sl 6 wcm)

Problems: TOOL DIDN'T OPEN IMMED - SLID 5' & OPEN 20 MIN LATER

Remarks: 800' CUSHION 55 gal ammonia, 15 gal fail safe, 15 gal diesel & water. 3/4" BOT CHOKE.

CHLORIDES AS RUN BY MUD ENGINEER:

MAKE UP WTR 25 ppm

MUD SAMPLE 150 "

TOP PP RECV. 25 "

MIDDLE " 850 "

BOT OF " 250 "

Agent of Operator -----

SAMPLER 50 ppm

GEOLOGIC SUMMARY AND ZONES OF INTEREST

Wolverine Exploration Company's Well Christmas Meadow's Federal #4-34, located in NE/SW/SE Section 4, T1N, R10E of Summit County, Utah, was spudded on 25 September 1987 in the Tertiary Echo Canyon Conglomerate Member of the Wasatch Group. Total depth of 7700' was reached on 30 September 1987 in the Weber Sandstone. Electric log tops are used below.

WASATCH FORMATION (0' - 4690')

The upper 675' of the Tertiary Wasatch was drilled with difficulty, using a 17½" bit. Cobbles of conglomerate and carbonate with abundant chert were observed. Below surface casing drilling continued in conglomerate of the Echo Canyon Member which consisted of limestone, dolomite and cherty sandstone, all of which showed hematite and limonite staining. Carbonates resembled those of the Thaynes and Phosphoria Formations, from which they were probably eroded. Very minor hydrocarbon gas shows were encountered along with dead black asphaltic staining. These sandy conglomerates and carbonates continued to approximately 3,500' where the character of the formations changed to bedded grayish brown-to-gray and white dolomite and limestone and white sandstone. Dull brown-to-yellowish brown fluorescence predominated with small amounts of bright yellow fluorescence were seen in the carbonate with no cut. At 3885' a small gas show was recorded.

Below the bedded carbonates at 3960' a light orange-to-white sandstone, subrounded-to-rounded with some frosting and predominantly unconsolidated, was encountered. This sandstone, resembling the Nugget Sandstone, caused considerable problems with loss of circulation. No hydrocarbon shows were encountered in the sandstone and thin interbedded dolomite except for minor amounts of asphaltic residue.

ANKAREH FORMATION (4690' - 5646')

The Ankareh consisted of orange brown-to-brown siltstone and reddish brown, maroon and purple shale, with minor white, purple and orange, very fine grained sandstone. Anhydrite stringers, inclusions and filled fractures were a significant accessory mineral. Minor dark gray limestone was present in the lower Ankareh. No hydrocarbon shows were noted.

THAYNES FORMATION (5646' - 6460')

The top at 5646' was picked at the first dolomite below the Ankareh Formation. The Thaynes contained a thin gray-to-brown limestone and gray-to-dark gray dolomite interbedded with gray and brown shale in the upper Thaynes. A brown-to-orange shale with minor siltstone approximately 100 feet thick separated these thicker dolomites from the Thaynes porosity, 6165' (E-Log) and 6182' (Sample). The Thaynes porosity drilled at a penetration rate of 2-3 minutes per foot. No hydrocarbon gas or sample shows were observed. Electric log porosities of 13%-17% were measured.

The lower Thaynes was a thick white-to-dark gray limestone and gray dolomite, microcrystalline-to-cryptocrystalline, predominantly tight. The Thaynes produced no hydrocarbon or sample shows.

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING
3 TRIAD CENTER, SUITE 350
SALT LAKE CITY, UT 84180-1203

NOV 23 1987

REPORT OF WATER ENCOUNTERED DURING DRILLING

Well Name & Number Christmas Meadows Federal #4-34
Operator Wolverine Exploration Company Address 400 First City Bank Tower
201 Main St., Fort Worth, TX 76102
Contractor Burris Drilling Company Address 600 - 17th Street, Suite 600-N
Denver, Colorado 80202
Location SW 1/4 SE 1/4 Sec. 4 T. 1N R. 10E County Summit

Water Sands

<u>Depth</u>		<u>Volume</u>	<u>Quality</u>
From	To	Flow Rate or Head	Fresh or Salty
1. <u>No water sands were encountered during drilling of this well.</u>			
2. _____			
3. _____			
4. _____			
5. _____			

(Continue on reverse side if necessary)

Formation TopsRemarks

- NOTE: (a) Report on this form as provided for in Rule 806, Oil and Gas Conservation General Rules.
- (b) If a water analysis has been made of the above reported zone, please forward a copy along with this form.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE
(Other instruction on re-
verse side)

Budget Bureau No. 1004-0135
Expires August 31, 1985

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL ☐ GAS WELL ☐ OTHER ☒ Plugged and Abandoned

2. NAME OF OPERATOR
Wolverine Exploration Company

3. ADDRESS OF OPERATOR
400 1st City Bank Tower, 201 Main St., Ft. Worth, TX 76102

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*
See also space 17 below.)
At surface

874' FSL, 1306' FEL (NE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$) 4-1N-10E

14. PERMIT NO.
43-043-30285

15. ELEVATIONS (Show whether DF, WT, GR, etc.)
8161' GR

5. LEASE DESIGNATION AND SERIAL NO.
U-24446-A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
Not Applicable

7. UNIT AGREEMENT NAME
Christmas Meadows

8. FARM OR LEASE NAME
Federal

9. WELL NO.
4-34

10. FIELD AND POOL, OR WILDCAT
Wildcat

11. SEC., T., R., M., OR BLK. AND
SURVEY OR AREA
Section 4, T1N, R10E

12. COUNTY OR PARISH
Summit

13. STATE
Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF ☐ PULL OR ALTER CASING ☐
FRACTURE TREAT ☐ MULTIPLE COMPLETE ☐
SHOOT OR ACIDIZE ☐ ABANDON* ☐
REPAIR WELL ☐ CHANGE PLANE ☐
(Other) Pump Reserve Pit ☒

SUBSEQUENT REPORT OF:

WATER SHUT-OFF ☐ REPAIRING WELL ☐
FRACTURE TREATMENT ☐ ALTERING CASING ☐
SHOOTING OR ACIDIZING ☐ ABANDONMENT* ☐
(Other) ☐

(NOTE: Report results of multiple completion on Well
Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Wolverine Exploration Company respectfully requests permission to siphon the fluids from the reserve pit on the above-referenced well location. The water will be siphoned from the reserve pit and allowed to disperse into the natural vegetation off-location. An analysis of the fluids in the reserve pit is attached for your convenience. This analysis indicates that the pit fluids do not contain abnormal concentrations of potentially harmful or hazardous compounds/chemicals and; therefore, should be suitable for surface disposal as proposed above.

18. I hereby certify that the foregoing is true and correct

SIGNED

Robert M. Anderson

TITLE

Authorized Agent

DATE

08/10/88

(This space for Federal or State office use)

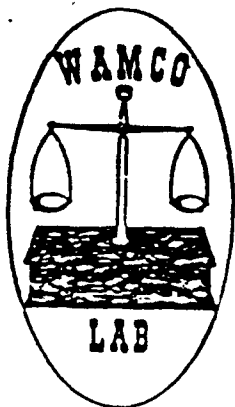
APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side



WAMCO LAB

P.O. BOX 2953 • CASPER, WYOMING 82602

Analytical Services
Water Treatment/Specialists

Phone
307/266-3252

ANALYSIS REPORT

Analysis in Milligrams per Liter except where Noted
Limits of Detection are Noted Following Less Than Mark ()

Sample No. 2

COMPANY Wolverine Exploration DATE 7/29/1988 LAB# 7418
FIELD Wildcat-Summit Co. STATE UT. NPDES No. _____
PERMIT APPROVAL DATE _____ EXPIRATION DATE _____
LEASE Christmas Meadows Federal SAMPLED BY Bob Anderson
#4-34
DATE 7/22/88 PLACE NE 1/4 Sec 4, T1N, R10E TIME TAKEN _____

TOTAL DISSOLVED SOLIDS (TDS)	<u>2838</u>
SULFATE (SO ₄)	<u>400</u>
CHLORIDE (Cl)	<u>77</u>
pH, Units	<u>7.43</u>
OIL & GREASE & SULFUR (O&G&S)	_____
PERCENT SULFUR (%S)	_____
OIL & GREASE ONLY (O&G)	<u>7.0</u>
CHROMIUM	<u>less than .01</u>

Analysis believed to be high due to presence of organic which does not volatilize at 180 degrees Centigrade.

WAMCO LAB

P. O. Box 2953 - Casper, WY 82602

ANALYSIS REPORT

COMPANY: Wolverine Exploration Co

DATE July 29, 1988

Date Rec'd 7/22/88

Sample Type: Water

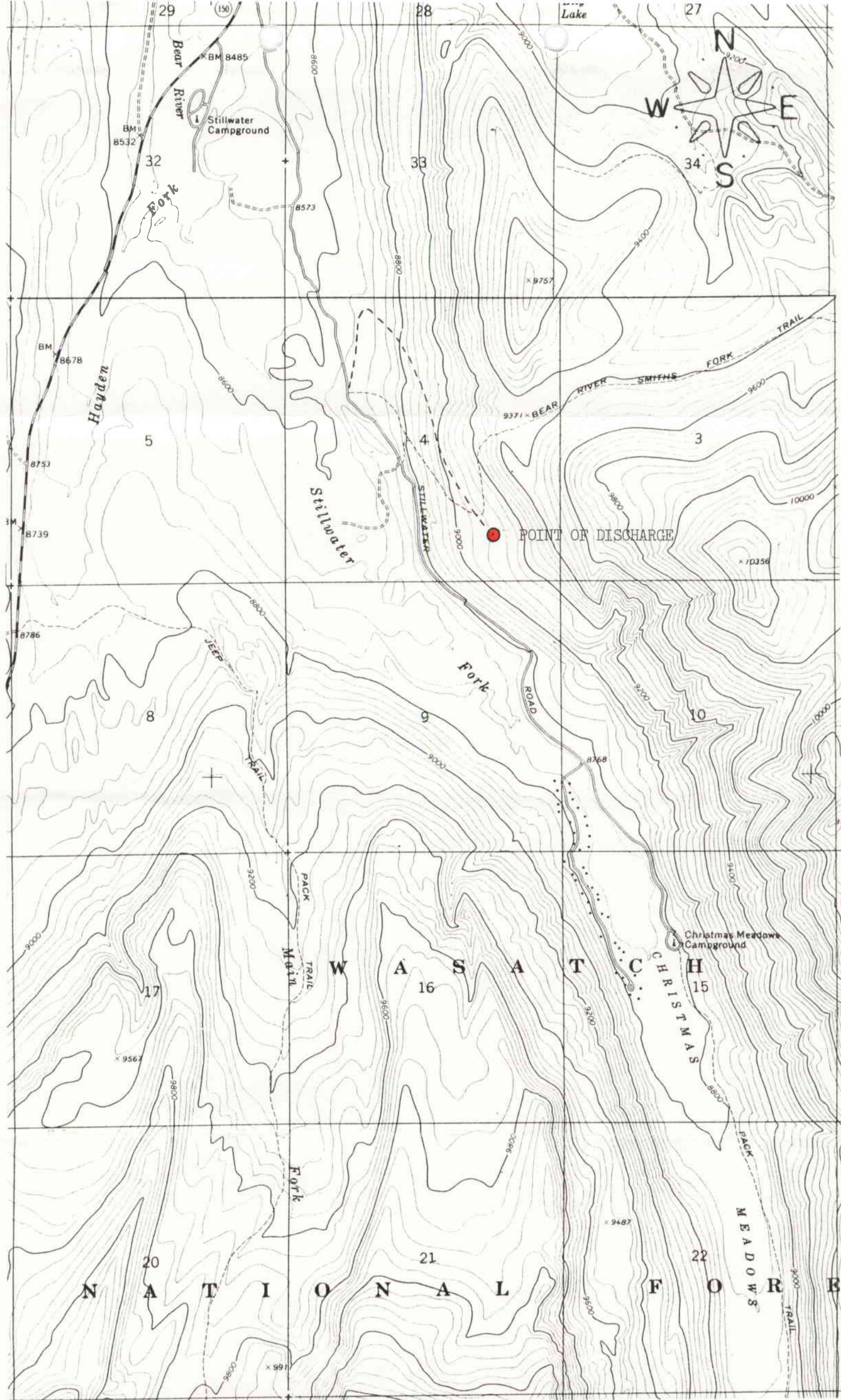
W. O. No. 7418

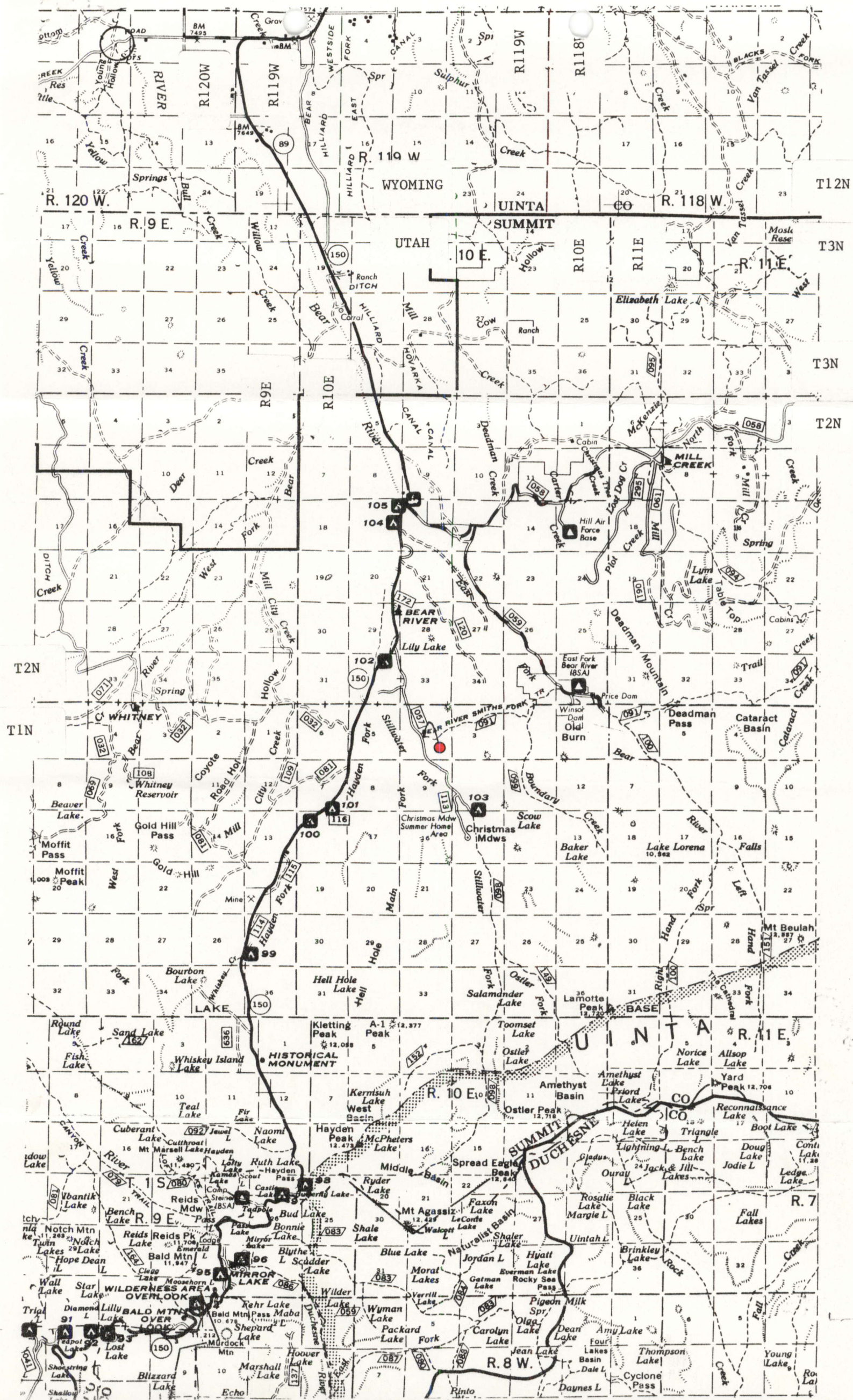
Analysis in Milligrams per Liter except where Noted
Limits of Detection are Noted Following Less Than Mark (<)

Sample No. 2
Sample Descr. Christmas Meadows Federal
4-34

Total Dissolved Solids (TDS)	2838
Sulfate (SO4)	400
Chloride (Cl)	77
pH	7.43
Chromium (Cr)	<0.01
Oil & Grease (O&G)	7.0

Analysis believed to be high due to presence of organic which does not volatilize at 180 degrees centigrade.





HEITZMAN DRILL-SITE SERVICES

DALE HEITZMAN
ROBERT M. ANDERSON

August 23, 1988

Mr. Fred Pehrson
Bureau of Water Pollution Control
Utah Department of Health
P.O. Box 16690
Salt Lake City, Utah 84116-0690

RE: Request to Discharge Drilling Fluids
Wolverine Exploration Company
Christmas Meadows Federal #4-34
NE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$, Section 4, T1N, R10E
Summit County, Utah

Dear Mr. Pehrson;

Attached is a copy of a Sundry Notice which was forwarded to the Salt Lake District Office, Bureau of Land Management requesting permission to discharge drilling fluids (water) contained within the reserve pit on the above-referenced well location into established vegetation adjacent to the existing well location. A map showing the location of the Christmas Meadows Federal #4-34 well location and a recent analysis of these drilling fluids have been included for your convenience.

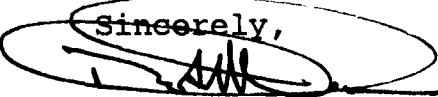
As stated in the Sundry Notice, Wolverine Exploration Company requests permission to dispose of approximately 43,000 gallons (estimated) of pit fluids by pumping (siphoning) these fluids out of the reserve pit and allowing them to disperse into the natural vegetation off-site. The siphon outlet would consist of perforated (irrigation) pipe strung along the natural ground surface below the location in order to prevent potential erosion and maximize dispersal of the fluids into the established vegetation. Any oily skim on the pit will be removed prior to commencement of disposal operations and siphoning will not be conducted during periods when the ground is saturated (when puddling of water occurs on the ground surface) or when the ground is frozen. Owing to the extremely dry conditions which exist in this area, we anticipate that the water will be readily absorbed into the surface soils in close proximity to the well location. Based upon the analysis of these pit fluids, we don't anticipate any adverse effects to the natural environment or ground water supplies resulting from the discharge of these fluids.



Mr. Frank Pehrson
Bureau of Water Pollution Control
August 23, 1988
Page Two

As we are required to reclaim this location this coming fall, we would appreciate your timely consideration of this request. Should you have any questions or require any additional information in regards to the above proposal, please do not hesitate to contact either Dale or Myself.

Sincerely,



Robert M. Anderson
Authorized Agent

RMA/ibm

Enclosure

xc: Mr. Jess Nunnelee
Wolverine Exploration Company
400 First City Bank Tower
201 Main Street
Fort Worth, Texas 76102

8-29

Loren: What's your reaction?

1. Analyses doesn't adequately demonstrate no contamination
2. What are the alternatives?
3. What is DOG's role
4. Would approving this establish poor precedent.

I don't think we could approve this w/o. extensive data to demonstrate there will be no adverse env. impacts.

Fred P



State of Utah
DEPARTMENT OF HEALTH
DIVISION OF ENVIRONMENTAL HEALTH

Norman H. Bangertter

Governor

Suzanne Dandoy, M.D., M.P.H.

Executive Director

Kenneth L. Alkema

Director

Bureau of Water Pollution Control

288 North 1460 West, P.O. Box 16690

Salt Lake City, Utah 84116-0690

(801) 538-6146

RECEIVED
SEP 6 1988

August 30, 1988

DIVISION OF
OIL, GAS & MINING

Mr. Gil Hunt
Division of Oil, Gas, and Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

RE: Request for Approval of Discharge of
Reserve Pit Fluids, Christmas Meadows
Federal #4-34.

Dear Gil:

43-043-30285

Attached you will find a request from Heitzman Drill-Site Services, in behalf of Wolverine Exploration Company, for a proposed discharge of reserve pit fluids.

As our staff discussed with you over the phone, the primary regulatory control of reserve pits is in your jurisdiction. Therefore, we refer the matter to your office.

We understand that if, after your evaluation, a discharge is still being considered, the request must be referred back to this office for approval. From our preliminary review, we have identified some concerns over the discharge and its potential effect on surface and ground water quality. We also question, whether the U.S. Forest Service should be contacted regarding the proposed discharge.

If you have any questions please call me at 538-6146.

Sincerely,

Fredrick C. Pehrson, P.E., Manager
Compliance and Monitoring Program
Bureau of Water Pollution Control

Attachment

cc: Robert M. Anderson, Heitzman Drill-Site Services
Jess Nunnelee, Wolverine Exploration Company

LBM:kc
0750c-8



Norman H. Bangerter

Governor

Dee C. Hansen

Executive Director

Dianne R. Nielson, Ph.D.

Division Director

State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

355 West North Temple

3 Triad Center, Suite 350

Salt Lake City, Utah 84180-1203

801-538-5340

September 21, 1988

Mr. Clyde N. Thompson
District Forest Ranger
Wasatch-Cache National Forest
P.O. Box 1880
Evanston, Wyoming 82930

Dear Mr. Thompson:

Re: Christmas Meadows Federal 4-34, Section 4, Township 1 North, Range 10
East, Summit County, Utah

This letter is written in response to a request by Heitzman Drill Site Services, agent for Wolverine Exploration Company, to discharge the fluid from the reserve pit at the referenced drill site. It is necessary that the fluid in the reserve pit be removed and proper reclamation of the site be effected, hopefully before winter conditions prevent such actions.

The reserve pit fluid appears to be a brownish, slightly saline water with a slight oil skim. The chemical analysis indicates a total dissolved solids (TDS) level of approximately 2800 milligrams per liter (mg/l) and a chloride concentration of 77 mg/l. From the analysis, it is impossible to determine a complete and accurate makeup of the dissolved constituents. I performed a field conductivity test on the fluid and the test showed agreement with the reported salinity.

If discharge of the reserve pit fluid is to a vegetated area, I would suggest a review of the fluid composition and its possible effect on the plant life by a person knowledgeable in that field. An alternative would be to dilute the reserve pit fluid with fresh water prior to discharge. Regardless, the disposal procedure should be closely supervised to assure that the fluid is not allowed to directly or indirectly enter and degrade existing surface or ground waters in the area.

Page 2
Mr. Clyde N. Thompson
September 21, 1988

I am assuming that final approval and supervision of these activities will be handled by the U.S. Forest Service. If I can be of further assistance, please contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Gil Hunt", with a stylized, flowing script.

Gil Hunt
Environmental/Geological Supervisor

tc
cc: Robert M. Anderson, Heitzman Drill-Site Services
Jess Nunnelee, Wolverine Exploration Company
0310U/65